

2021 Governor's Investment in Technical Education (GIVE2) Grant Proposal

Tennessee Robotics Advanced Manufacturing (TRAM) Project

Motlow State Community College (Lead & Fiscal Entity)

In Partnership with:

Workforce: Rutherford County Chamber of Commerce, Rutherford Works, TCAT

Smyrna, TCAT Nashville, Oakland High School


Industry: Ultium Cells & Kasai North America

Dr. Michael Torrence, President
6015 Ledford Mill Road, Lynchburg, TN 37352 931-393-1682
mtorrence@mscc.edu

Larry Flatt, Dean of Career and Technical Programs
225 Cadillac Lane, McMinnville, TN 37110
Phone: 931-393-1720
Email: lflatt@mscc.edu

Funding Requested:

\$1,000,000.00



Dr. Michael Torrence
President Motlow State Community College



Larry Flatt
Dean of Career and Technical Programs
Motlow State Community College

Table of Contents

Abstract	3
Section 1- Demonstration of Need	4
Section 2 - Program Plan	8
Section 3 - Partnerships	14
Section 4 - Budget Plan	16
Section 5 - Sustainability Plan	16
Section 6 - Economic Status Acknowledgement	17
List of Appendices	19
Appendix A - Tennessee Economic Data	21
Appendix B - Tennessee Workforce Data: Jobs4TN	23
Appendix C - Timeline and Measurable Objectives/Milestones	28
Appendix D - Memorandums of Understanding (MOUs)	29
Appendix E - Proven Examples of Strong Partnerships	51
Appendix F - Strong Partnerships By Design	52
Appendix G - Budget Plan	53
Appendix H - Contingency Plan	58
Appendix I - TRAM Project Staff	59

Abstract

As Mechatronics and Automation training leaders, Motlow State and its Local Collaborators are requesting GIVE2 grant funding for the ***Tennessee Robotics Advanced Manufacturing (TRAM) project*** to develop FANUC Robotic and Mitsubishi Programmable Logic Controls (PLC) industrial certification programs.

The TRAM project aligns with Tennessee's Drive to 55 goals by directly increasing the number of state citizens with both degrees and credentials attained through higher education attainment, and produces marketable skills needed by employers in Middle Tennessee. The TRAM initiative will enable underserved, underprepared, and underemployed citizens to compete for available jobs and will create a talent pipeline among area high school students. TRAM directly responds to meet the needs of 1,600 newly announced advanced manufacturing jobs or positions leading to high-wage and sustainable careers at the Ultium Cells EV battery plant, currently under construction in Spring Hill, Tennessee.

Motlow State's early development of one of the nation's first two-year degrees in mechatronics, one of the nation's only two-year degrees in a robotics concentration, as well as its recent launch of the Advanced Robotics Training Center (ARTC) positions it as the Lead Agency for this proposal. Motlow State is a nationally recognized industry trainer for the world's leading Robotics and Automation companies. Motlow is also Tennessee's original and leading provider of two-year Mechatronic degree programs.

Section 1. - TRAM GIVE2 Grant Proposal - Demonstration of Need

To respond to local industry need and increase higher education attainment in support of Tennessee's Drive to 55 initiative goals and objectives, Motlow State Community College (MSCC) and its Local Collaborative partners (Rutherford County Chamber of Commerce, Rutherford Works, Oakland High School, Technical College of Applied Technology Smyrna, Technical College of Applied Technology Nashville [henceforth referred to as TCATs], Ultium Cell), request funding through the Governor's Investment in Vocational Education (GIVE2) grant program for a *Tennessee Robotics Advanced Manufacturing* (TRAM) project.

TRAM responds to a demonstrated industry and community need, and to an established state goal. This need is evidenced here using a variety of empirical sources.

Alignment with Tennessee's Drive to 55 Goal: TRAM will aid in reaching Drive to 55 goals by establishing, expanding, and innovating secondary-to-postsecondary programming that leads to marketable degrees and vendible, stackable credentials and certificates meeting industry's most current demands as established in empirical data sources, included but not limited to:

- Tennessee Higher Education Commission's (THEC) 2021 Labor Supply and Demand Report
- Center for Economic Research in Tennessee (CERT),
- United States Department of Labor's Bureau of Labor Statistics (BLS) employment projections database
- Tennessee Department of Labor and Workforce Development's (TNDLWD)
- Jobs4TN database.
- Comprehensive Economic Development Strategy (CEDS) from Upper Cumberland Development District.

Localized Data Demonstrating the Need for Action: A wealth of insight was drawn

from these sources to inform this proposal. From among those sources, the quantitative datasets most readily demonstrating the need for the TRAM initiative are outlined here.

THEC Academic Supply and Occupational Demand Report: Page 26 from the Academic Supply and Occupational Demand report indicates that one of the central SOC Codes for the TRAM initiative: 17-3027 Mechanical Technologists and Technicians earn median wages of \$51,169 with a two-year associate degree. The only two-year degrees with higher median wages were healthcare careers. This suggests that when livable wages are a chief consideration, there are no other non-healthcare two-degree programs that merit greater investment at this time. Page 37 of the same report documents a state shift away from non-STEM credentials toward pro-STEM training which further supports the TRAM initiative.

Tennessee Higher Education Commission: THEC's LEAP In-demand Occupations Report asserts that of the 11 SOC codes evaluated for TRAM all, but three (3) job categories are at or above the national average for demand collectively yielding a 65% growth rate by 2026. See Appendix A.

Center for Economic Research in Tennessee (CERT): On page 12 of the 2020 LEAP Report, CERT supports the need for the TRAM initiative. CERT reports that a "robust STEM workforce is critical to Tennessee's continued growth of advanced industries." TRAM produces a STEM workforce.

Comprehensive Economic Development Strategy: According to page 14 in the 2018-2022 Comprehensive Economic Development Strategy (CEDS), "there is a significant labor workforce issue of underemployment. The combination of low-density

population, lack of certain skills in the workforce and limited availability of high-speed internet all contribute to the difficulty in attracting and keeping businesses in the rural areas. Companies that rely on equipment and machinery that use the latest technology need trained technicians. If those are not available in the area, they have to pay a competitive salary to get employees to relocate to the more rural areas.” This underscores the compelling need for the TRAM initiative.

Tennessee Department of Labor and Workforce Development: As of September 14, 2021 (Jobs4TN), there were 750 open positions in Tennessee under the heading *Information Technology, Installation, Maintenance, and Repair Occupations*. There were more than 1,100 open positions listed for *Programmers*, more than 800 open jobs listed in *Production Installation, Maintenance, and Repair* and more than 12,000 open positions listed as *Production Worker occupations*. There were 425 open positions titled *Industrial Maintenance*, more than 1,000 open positions for PLC trained workers, more than 4,550 positions for *Automation technicians*, more than 850 open robotics positions and more than 1,000 positions entitled PLC technician. See **Appendix B**.

Immediate Industry Demand: Ultium Cells is a EV battery technology division of General Motors (GM). The new Ultium plant is soon-to-be under construction near GM’s existing location in Spring Hill, TN. This new industry was successfully recruited via work led by the TN Dept of Labor and TN Dept. of Economic Development. To address the need to upskill, train, and prepare Tennesseans for these new jobs, Motlow State has been selected as a strategic training partner to certify up to sixteen hundred (1600) individuals for new jobs at the factory scheduled to open in Q1 2023. Funding from the GIVE2 grant for the TRAM initiative will support Ultium and its supply chain industry

partners and employers with immediate and long term training needs, both during and after the grant period related to training, support, and implementation of FANUC Robots and Mitsubishi Advanced PLC technology. The ultimate goal or objective of this project is to develop a sustainable infrastructure that prepares and equips the Middle Tennessee workforce with the skills required for high demand jobs and increases the region's competitiveness for additional and long-term industry and workforce investments.

Linkages Between Grant Activities and Local Needs

Rutherford County School System, area TCATs, and Motlow State all work cooperatively to meet the education and training needs of Middle Tennesseans. In each separate institutional role, there exists an **overarching** common mission to prepare learners to achieve self-actualization via stable employment, livable wages, and prosocial contributions. It is the program goal of our Local Collaborative through the TRAM initiative to conduct the work necessary to:

- *directly and deeply* align our educational pathways,
- build capacity **within** those aligned pathways,
- develop mutual sustainability, and
- pursue program replication with rising partners.

Need for Curriculum Alignment and Career Pipeline Development & Stability: The mutual goals and needs of our Local Collaborative and Ultium Cell's immediate training needs were established through a comprehensive evaluation of a regional assessment, area industry analysis, as well. TRAM's Demonstration of Need is further established by an interdisciplinary team of subject matter experts from each contributing partner. The findings of these recognized industry authorities established the foundation of TRAM's

Demonstration of Need, asserting the timeliness and essentialness of direct inter and intra program alignment, lock-step capacity-building, interdependent program sustainability, and a transparent, open-source mindset toward program replication with future partners.

Based on the data and evidence cited above, it is evident there are current needs for those obtaining industry credentials, certificates and AAS degrees from the three educational partners. In addition, the overarching request for funding the TRAM project, is to provide employable and skilled graduates and/or incumbent workers who need additional upskilling or training to fill immediate and new job opportunities for local and regional industrial partner(s). Ultium, in conjunction with the TDLWD, and the Tennessee Department of Economic Development is building a 2.8 mil. square foot facility to manufacture batteries for the GM Electric Vehicle (EV) Program. As a partner, Ultium has shared specific data with Motlow College that projects 1,600 new jobs at their new facility in Spring Hill, TN. Ultium has requested that Motlow and its academic partners (in this grant) modify and enhance programs of study specific to their matrix of essential skills (i.e., PLC, Robotics). Conservatively, over the next 24 months, a minimum of 800 jobs will be available to appropriately trained workers. The impact on Tennessee's economy from this training model could generate as much as \$30mil./year.

Section 2 - Program Plan

The proposed TRAM project focuses on developing both production and advance automation skills by:

1. Expanding the course content, scope, and certifications in Motlow's Mechatronic program offered on our three campuses, and through our dual enrollment

courses program taught at our partner high schools: and

2. Expanding the course content, scope, and certifications currently offered by our TCAT partners through their Industrial certificate programs, and
3. Creating an Advanced Programmable Logical Controller (PLC) curriculum and developing a skill pathway and increasing student access to and availability of FANUC industrial robots to support Ultium's specific automation and manufacturing needs.

With GIVE2 grant funding, through the TRAM project, these highly specialized programs and industry-specific credentials, and equipment-specific certifications will be aligned via a common, clearly scaffolded curriculum methodology spread across the Local Collaborative and among all of our partners' industrial courses. The TRAM initiative draws upon and expands Motlow's current academia-industry partnerships allowing the Local Collaborative to swiftly and effectively achieve this urgently needed next-phase alignment, capacity-building, and pipeline seeding. This for a more efficient, shorter implementation (speed to market) cycle for new program creation will help us meet the near-term workforce development demands while also collaborating to ensure sustainability for emerging workforce needs.

In this section of the proposal, TRAM's Mechatronics, Industrial Tech. and Robotics Program Expansion is described in greater detail. Under the oversight of the TN Board of Regents, Motlow and partnered TCATs pursue a common mission to support Tennessee's Drive 55 and advance Work-Based Learning (WBL) opportunities in each institution's defined service area. Collectively, they currently address this mission by utilizing Motlow's Mechatronics and Robotics AAS program, the TCAT's Industrial

Maintenance and Robotics certificate programs, and Oakland High School's dual enrollment CTE pathways.

Clear Alignment of Workforce Data and Drive to 55 Goals: The central goal of Drive to 55 is for 55% of Tennessee's population to attain a higher education credential by 2025. TRAM will create multiple opportunities for TN residents to attain higher education credentials during high school, at an regional TCAT, or through expanding programs at Motlow. For details on how Motlow and its partners will specifically address the Tennessee Drive to 55 goals in its TRAM initiative, see the **Table 1** below.

Table 1: Alignment of Workforce Data-Informed Initiatives and Drive to 55 Goals

1.	Motlow: By broadening Motlow's existing Mechatronics for-credit degree programs and curriculum to include new, and emerging, and high-demand industry-specific skills. This will include broadening embedded workforce training certifications now considered essential to Tennessee's expanding manufacturing ecosystem. The curriculum and programming enhancements targeted, which are considered high-demand specialty-skills that reflect the unique needs and requests of Middle Tennessee industry, specifically Ultium Cells.
2.	TCATS: By broadening our TCAT partners Industrial Maintenance, and/or Advanced Manufacturing Mechatronics certificate programs to include new and emerging industry-specific skills essential to Tennessee manufacturing sector and supply chain employers.
3.	Oakland: By both broadening and aligning the Oakland High School to College Mechatronics (Oakland-to-Motlow) pathway, as well as the Oakland-to-TCAT-to-Motlow pathway by providing new curricula and training equipment essential to cultivate and prepare these students to participate in work based learning (WBL) to gain the essential skills needed for education and career pathway advancement so that these learners can take compete for newly created job opportunities.

4.	<p>Ultium Cells: Deepen the value of the TRAM collaborative by ensuring an early and meaningful industry lens for students.</p> <ul style="list-style-type: none"> • Provide opportunities for students to participate in work-based learning experiences; • Provide quarterly guest speaker visits to K-12 and higher education partners throughout the grant term; • Host annual mock interview contests for K-12 and higher education students; • Sponsor minimum of 1 Career Fair annually over the grant term; • Provide quarterly soft skills training workshops for students (punctuality, teamwork, communication, etc.); • Cultivate opportunities for co-ops, internships, and/or apprenticeships as applicable with students; • Participate on the Advisory Team through consistent meeting attendance.
5.	<p>Collaboratively: Develops a regional collaborative that enables and sustains recruiting, expanding and engaging additional partnerships and career pathways, prospective workers, and other secondary schools, industrial partners and manufacturers in and out of our service area.</p>

Toward achievement of the established goals, Motlow and its partners propose leveraging the requested GIVE2 grant funding and resulting TRAM project to expand current programming to include FANUC Industrial Robotics and Mitsubishi Industrial Programming Logic Control (PLC) credentials. Inclusion of this additional curricula and associated training equipment and programming model, will enable both traditional and non-traditional college students to gain the essential skills necessary to be ready for employment as one of Ultium new hires. In this plan, non-traditional learners include a host of other individuals within the learning ecosystem such as underserved, underemployed, and incumbent or transitioning workers. The proposed TRAM project's education and training will also prepare these candidates to compete for other high-

wage, stable employment opportunities at other regional manufacturers within the broader supply chain and technology-related employers.

Project Overview: While Motow and its sister TCATs serve citizens within a defined service area, each institution's job placement tracking reveals that mechatronics, industrial tech., and maintenance tech. completers (both certificate and degreed) are employed in industries throughout Tennessee. Thus, while these institutions are responsible for meeting the learning needs of students in their respective service areas, the workforce they create go on to serve the entire state. Thus, while the TRAM project is critical to meeting very localized, time-sensitive, and highly defined regional needs, the program will and must continue to recruit new candidates into the pipeline both to ensure Ultium immediate and continuing needs as well as to support the larger industrial ecosystem that drew Ultium to Middle TN. To meet the needs of both learners and the industries providing TRAM program "completers" career opportunities, the pathway alignment, and capacity expansion described in this proposal must include: (1) appropriate curriculum design; (2) faculty development; and (3) equipment investments. In order to provide the industrial credentials required by Ultrium, additional and/or upgraded equipment, including the robots and PLC trainers must support the additional advanced manufacturing courses required. The equipment includes: 1) FANUC robotic training systems; and 2) Mitsubishi PLC training systems.

- The anticipated cost for this equipment is \$405,000.00.
- The additional classes required for the robotics concentration include:

Table 2: Course Offerings

Course	Location	Equipment / Offering	Outcome Overview
MECH 1350	Students	Fanuc Robotic Training	Hands on Robotic Skills
MECH 1340	Students	Digital Fundamentals and PLC	Basic PLC functions and testing; identification, troubleshooting
MECH 2710	Students	Fanuc Certification	Operation, Programming, Safety
MECH 2750	Students	above	system
IEM 4030	TCAT Students	Programmable Control Logic	Programmable Logic Controllers
IEM 4040	TCAT Students	Robotics	Maintenance, Operation, Programming Fundamentals
IEM 5070*	TCAT Students	Advanced Robotics	Advanced Robotics
IEM 5010	TCAT Students	GX Works3 Mitsubishi PLC	Advanced PLC
AMT 3050	TCAT Students	Automation Systems and Mechatronics I	Automation Systems and Mechatronics I
AMT 4040	TCAT Students	Automation Systems and Mechatronics II	Automation Systems and Mechatronics II
AMT 5040	TCAT Students	Capstone Mechatronics	Capstone - Project Based Mechatronics

Motlow has a highly successful Mechatronics program for high school 11th and 12th graders that includes hands-on dual-enrolled WBL concepts, such as co-ops, career mentoring, field trip(s), apprenticeship and others, along with career and technical education (CTE) that created this partnership and will allow the Collaborative to expand in the future.

Detailed Project Timeline and Overview: Here we address the program timeline in overview. A detailed timeline can be found at **Appendix C**. In summary, TRAM action items will begin immediately upon receipt of the grant. The initial priorities will be curriculum development and equipment investments so that we can be ready for instruction as soon as possible. Development of the *TRAM Workforce Advisory* and marketing collateral for use in student cultivation will begin immediately as well. Student recruitment will be an early-stage activity (and will continue throughout the grant period) and will transition to instruction and ultimately, job placement.

Measurable Objective by Phase: measurable outcomes for each phase of the grant period are described in detail in **Appendix C**.

Recruitment of Underrepresented Student Groups: The recruitment of underrepresented groups is central to the mission of Motlow and the TCATS. Both

institutions have recruitment pipelines that will be used to support TRAM. Likewise, a dedicated marketing and communications plan will be developed yielding TRAM-specific collateral and TRAM-centric key messages. The goal of the marketing and communications plan will be two-fold, first to cultivate student prospects inside Oakland High Schools and second, to cultivate non-traditional student prospects. Strategies for specifically reaching underrepresented groups will be developed, but will include utilization of special media channels, community venues, mailings, and referrals.

Project Governance & Accountability Plan: The governance and accountability plan for the TRAM initiative is seated in the MOU already in place between Ultium Cells and all grant Local Collaborators. The MOU along with the TRAM proposal establish clear roles, responsibilities, deliverables, and timelines. While there are a host of milestone measurements that will mark program progress, ultimately, the definition of success for TRAM is job placement of no less than 800 trained workers with Ultium Cells.

Structure of Optional Work Based Learning (WBL) Plan: WBL experiences serve as a central feature of the TRAM plan. The technical equipment skill sets that prospective workers must develop are only achievable by learning, performing, and being assessed using real equipment in a factory-smartlab. Further, the TRAM plan includes early WBL opportunities through plant tours, job shadowing, internships, ultimately apprenticeships and/or temporary employment leading to full-time employment.

Role of Proposed Equipment: The role of the equipment procured through TRAM will be to establish the factory-smartlab essential to the hands-on learning for a learn-do-assess working classroom environment. This factory-smartlab will be designed to simulate GM/Ultium equipment set-ups essential to developing student skills and to

support student credentialing.

Section 3 - Strength of Partnerships

Strength of Proposed TRAM Partnership: Partnerships are at the heart of the TRAM project and the current plan includes the partners shown in the table below. The strength of this partnership is seated in the appropriate alignment of roles and responsibilities of each partner. Strengths of this partnership are also grounded in the pre-existing MOUs the group has established. **Appendix C** contains the Memorandums of Understanding (MOU) from each K-12, higher education system and industry partner outlining specific roles and responsibilities.

Capabilities of Each Mandatory Partner In Ensuring Success: Each partner selected for the TRAM initiative was chosen for its ability to ensure programming outcomes. Each partner has senior leadership support for its role in TRAM. Each partner has the funding and talent capacity outside of the needs outlined in this proposal.

Contingency Plan: Given the uncertainty of events beyond the control of the TRAM partnership, a contingency plan has been prepared. See **Appendix G**

Memorandums of Understanding: All partners have signed MOUs. See **Appendix D**.

Table 3: Detailed Description of Mandatory Partner Implementation Roles

Local Collaborative Partner	Partner Implementation Role
Motlow State Community College (MSCC)	Lead Education Workforce Partner, Grant Management, Training, Curriculum Development, TRAM Advisory Committee
Oakland High School (Rutherford County)	Education Workforce Partner, Training Site for FANUC Robotidcs and Mitsubishi PLC, TRAM Advisory Committee
Ultium Cells, LLC	Industrial Workforce Partner, Cultivate opportunities for co-ops, internships, and/or apprenticeships, Robotics/PLC Subject Matter Expert
TCAT Smyrna	Education Workforce Partner, Training Site for FANUC Robotidcs and Mitsubishi PLC, TRAM Advisory Committee
TCAT Nashville	Education Workforce Partner, Training Site for FANUC Robotidcs and Mitsubishi PLC, TRAM Advisory Committee
Rutherford County Chamber of Commerce	Workforce Partner, Communication, Masrketing, Outreach,, TRAM Advisory Committee
Rutherford Works	Cultivase Work Based Learning Opportunities, Local Economic Workforce Partner, Communication, Marketing, Outreach

Proven Examples of Strong Partnerships: Here we also offer several Motlow proven examples of existing partnerships that demonstrate a history of success that is relevant to the TRAM proposal. A comprehensive visual list of industry and academic partnerships, Motlow’s demonstrates a pattern of partnerships, See **Appendix E**. Existing Motlow partnership-evidence most germane to the TRAM proposal include but are not limited to:

- Motlow partnered with Middle Tennessee State University (MTSU) to create a technical pathway allowing students to complete a BS degree in Mechatronics Engineering at the Motlow McMinnville campus.
- Motlow has an articulation agreement in place with Tennessee State University (TSU) allowing students to achieve a BS in Industrial Technology that can be completed at the McMinnville campus.
- Through a Middle College program, Motlow built an award-winning partnership with

Warren County Schools to teach Level I & II mechatronics at Warren County HS.

Strong Partnerships By Design: It is important to note that Motlow's mechatronics program is thoughtfully and intentionally designed to offer flexibility that it allows students to 1) enter the workforce immediately upon completing certification, 2) complete an AAS degree, 3) continue on to a BS degree, or 4) continue on to advanced degrees. For a deeper understanding of the on-and-off-ramp opportunities Motlow has created within its mechatronics partnerships, See ***Appendix F***.

Section 4 - Budget Plan

The projected budget for the TRAM project is \$1,000,000 and consists of the following chief components: FANUC STEM carts, Mitsubishi Trainers PLCs and computers, academic faculty and industry-side train-the-trainer instruction. A detailed outline of the complete TRAM budget and supporting narrative can be found in ***Appendix G***.

Section 5 - Sustainability Plan

Motlow is committed to continuing to build essential and sustainable career pathways between industry, secondary, and postsecondary education. As such, we will continue to support the pathways and credentials produced by this grant. Motlow will continue to facilitate the Advisory Group, honor the MOUs, employ the instructional, recruiting, and communications staff necessary to both share and safeguard deliverables produced by this grant so long as TRAM is viable and student enrollment/industry need persists.

Motlow will also continue to facilitate related engagement with Local Collaborators as long as those partnerships are viable. Motlow's long-term goal is to use the deliverables (relationships, curricula, trained staff, and equipment) as gateways toward institutionalizing mechatronics programs in other K-12 systems in our service area.

Motlow is also committed to maintain the robotics and PLC training systems obtained as a result of this funding. In addition to incorporating these costs into our budget following the grant period, we will continue to leverage partnerships and seek other external funding to expand these programs. Motlow will continue to ensure that future programming persists in the goal of serving underserved and underemployed prospects. Motlow will share the deliverables from this grant in keeping with an open-source approach proactively sharing deliverables with and through the Departments of Labor and Workforce and Economic Development groups with the hopes of furthering this plan across the state to continue to recruit new high-tech employers into the state. Sustainability funding may also arise to address equipment maintenance and repairs via fee-for-service pre-employment services provided to Ultium Cells

Section 6 - Economic Status Acknowledgement

Prospective students from throughout all counties in the Motlow service area will be able to access this training. Several of the counties in Motlow's service area are designated at-risk or transitional. See **Appendix A** for a list of Motlow counties designated as at-risk or transitional that will benefit from the curriculum design and pathway development of this project. These designations are reported per the 2020 Appalachian Regional Commission (ARC). Bringing all 95 TN counties to transitional status is a goal of Governor Lee's administration as well as the ARC.

List of Appendices

1. Appendix A - Tennessee Economic Data
2. Appendix B - Tennessee Workforce Data: Jobs4TN
3. Appendix C - Timeline and Measurable Objectives/Milestones
4. Appendix D - Memorandums of Understanding (MOUs)
5. Appendix E - Proven Examples of Strong Partnerships
6. Appendix F - Strong Partnerships By Design
7. Appendix G - Budget Plan
8. Appendix H - Contingency Plan
9. Appendix I - TRAM Project Staff

Appendix A

Tennessee Economic Data

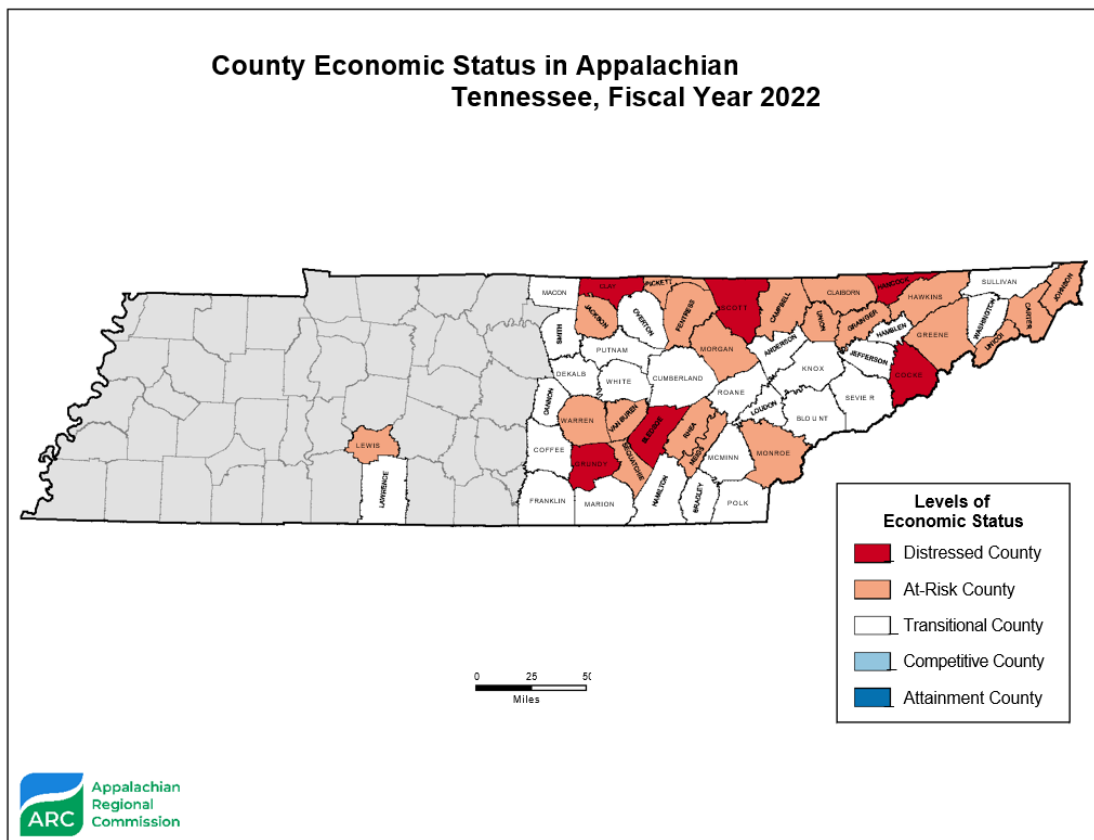
LEAP InDemand Occupational Data

LEAP In-Demand Occupations Report						
OES 2019 SOC Code	Description	2019 Jobs	2019 Employment Concentration (National Avg. is 1.00)	2026 Projected Employment	2016-2026 Annual Avg. Percent Change	Annual Openings (2016-2026)
49-9043	Maintenance Workers, Machinery	930	1.87	2,090	3.87%	245
49-9071	Maintenance and Repair Workers, General	8,030	0.83	10,660	1.93%	1,125
51-2090	Miscellaneous Assemblers and Fabricators	14,000	1.50	24,250	0.82%	2,875
51-9111	Packaging and Filling Machine Operators and Tenders	2,000	0.75	3,550	1.40%	425
51-9198	Helpers--Production Workers	2,540	1.23	6,310	2.52%	975
North Middle	Totals	27,500	1.24	46,860	2%	5,645
17-3027	Mechanical Engineering Technologists and Technicians	70	1.55	230	2.64%	20
51-4041	Machinists	870	2.15	770	1.95%	85
51-9198	Helpers--Production Workers	710	2.22	580	1.52%	90
Southern Middle	Totals	1,650	2.0	1,580	2%	195
49-9071	Maintenance and Repair Workers, General	890	0.86	1,550	0.97%	155
51-2090	Miscellaneous Assemblers and Fabricators	2,700	2.71	4,130	-0.14%	475
51-4041	Machinists	280	1.00	510	0.47%	50
Upper Cumberland	Totals	3,870	1.53	6,190	0%	680
		33,020	3.714	54,630	3%	6,520
<i>Of the eleven SOC codes , all but three are at or above the national average</i>						
65% increase in job opportunities from base year 2019, which equates to a 3%						

County Economic Status and Number of Distressed Areas in Appalachian Tennessee, Fiscal Year 2022

Counties in Bold Contain Distressed Areas

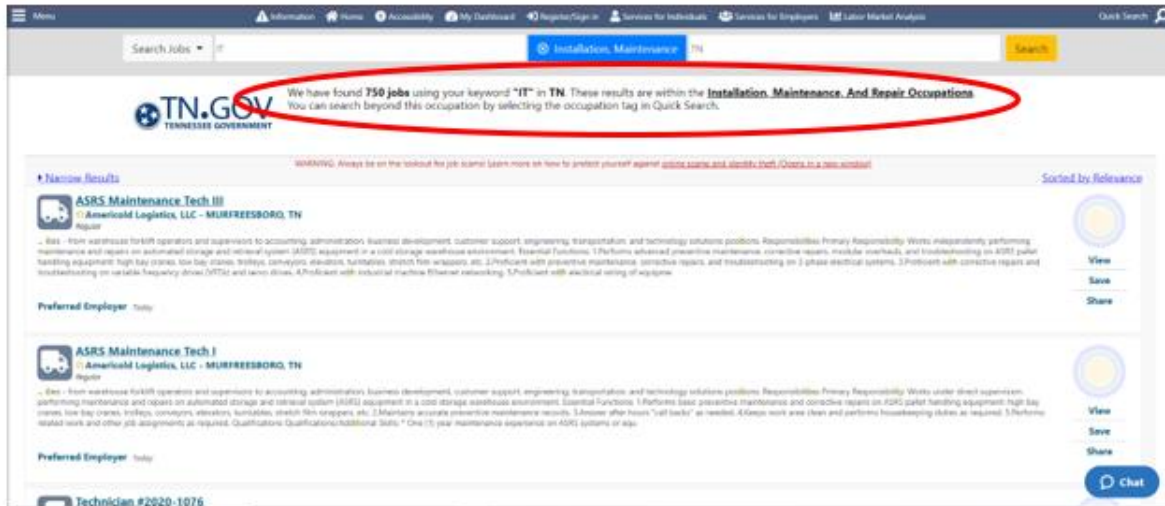
<i>County</i>	<i>Economic Status</i>	<i>Number of Distressed Areas</i>	<i>County</i>	<i>Economic Status</i>	<i>Number of Distressed Areas</i>
Cannon	Transitional				
Coffee	Transitional	1	Van Buren	At-Risk	
De Kalb	Transitional	1	Warren	At-Risk	3
Franklin	Transitional		White	Transitional	2



Appendix B

Tennessee Jobs4TN Data

750 Information Technology, Maintenance, and Repair



Search Jobs: IT

Installation, Maintenance, And Repair Occupations

We have found 750 jobs using your keyword "IT" in TN. These results are within the Installation, Maintenance, And Repair Occupations. You can search beyond this occupation by selecting the occupation tag in Quick Search.

Sorted by Relevance

ASRS Maintenance Tech III
Amerihold Logistics, LLC - MURFREESBORO, TN
Regner

... Role - from warehouse forklift operators and supervisors to accounting, administration, business development, customer support, engineering, transportation, and technology solutions positions. Responsibilities: Primary Responsibility: Works independently performing maintenance and repairs on automated storage and retrieval system (ASRS) equipment in a cold storage warehouse environment. Essential Functions: 1. Performs advanced preventive maintenance, corrective repairs, module overhauls, and troubleshooting on ASRS pallet handling equipment: high bay cranes, low bay cranes, shuttles, conveyors, elevators, turntables, stacker/retrievers, etc. 2. Proficient with preventive maintenance, corrective repairs, and troubleshooting on 3 phase electrical systems. 3. Proficient with corrective repairs and troubleshooting on variable frequency drives (VFDs) and servo drives. 4. Proficient with industrial machine Ethernet networking. 5. Proficient with electrical wiring of equipment.

Preferred Employer: today

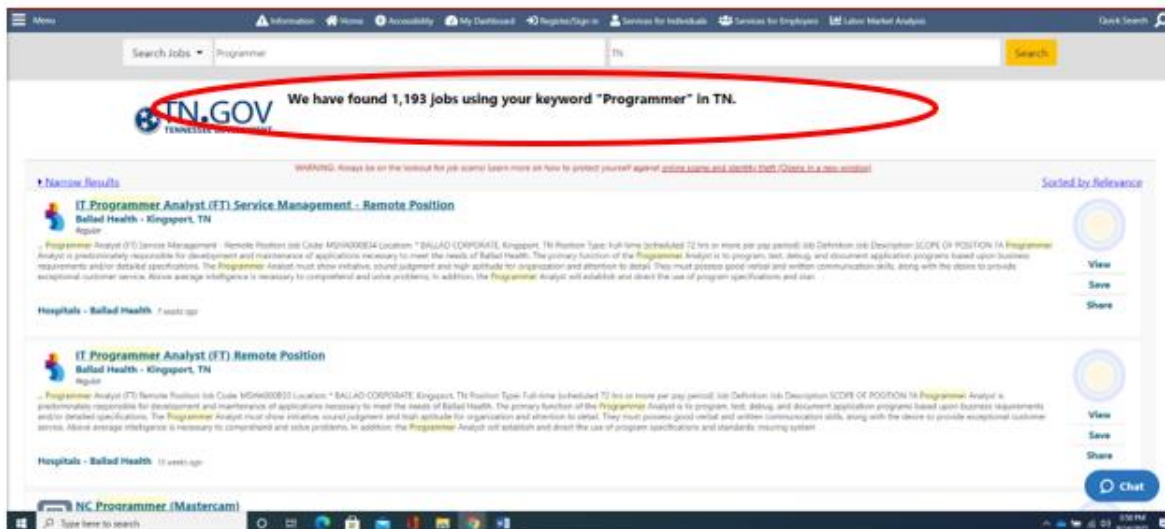
ASRS Maintenance Tech I
Amerihold Logistics, LLC - MURFREESBORO, TN
Regner

... Role - from warehouse forklift operators and supervisors to accounting, administration, business development, customer support, engineering, transportation, and technology solutions positions. Responsibilities: Primary Responsibility: Works under direct supervision performing maintenance and repairs on automated storage and retrieval system (ASRS) equipment in a cold storage warehouse environment. Essential Functions: 1. Performs basic preventive maintenance and corrective repairs on ASRS pallet handling equipment: high bay cranes, low bay cranes, shuttles, conveyors, elevators, turntables, stacker/retrievers, etc. 2. Maintains accurate preventive maintenance records. 3. Performs other tasks "as needed". 4. Keeps work area clean and performs housekeeping duties as required. 5. Performs related work and other job assignments as required. Qualifications: Qualifications/Additional Info: * One (1) year maintenance experience on ASRS systems or equivalent.

Preferred Employer: today

Technician #2020-1076

1,100+ Programmer Positions



Search Jobs: Programmer

IT

We have found 1,193 jobs using your keyword "Programmer" in TN.

Sorted by Relevance

IT Programmer Analyst (FT) Service Management - Remote Position
Ballad Health - Kingsport, TN
Regner

... Programmer Analyst (FT) Service Management - Remote Position Job Code: M504000004 Location: *BALLAD-CORPORATE, Kingsport, TN Position Type: Full-time (scheduled 72 hrs or more per pay period) Job Description: SCOPE OF POSITION: IT A Programmer Analyst is predominantly responsible for development and maintenance of applications necessary to meet the needs of Ballad Health. The primary function of the Programmer Analyst is to program, test, debug, and document application programs based upon business requirements and/or detailed specifications. The Programmer Analyst must show initiative, sound judgment and high aptitude for organization and attention to detail. They must possess good verbal and written communication skills, along with the desire to provide exceptional customer service. Above average intelligence is necessary to comprehend and solve problems. In addition, the Programmer Analyst will establish and direct the use of program specifications and standards.

Hospitals - Ballad Health 7 weeks ago

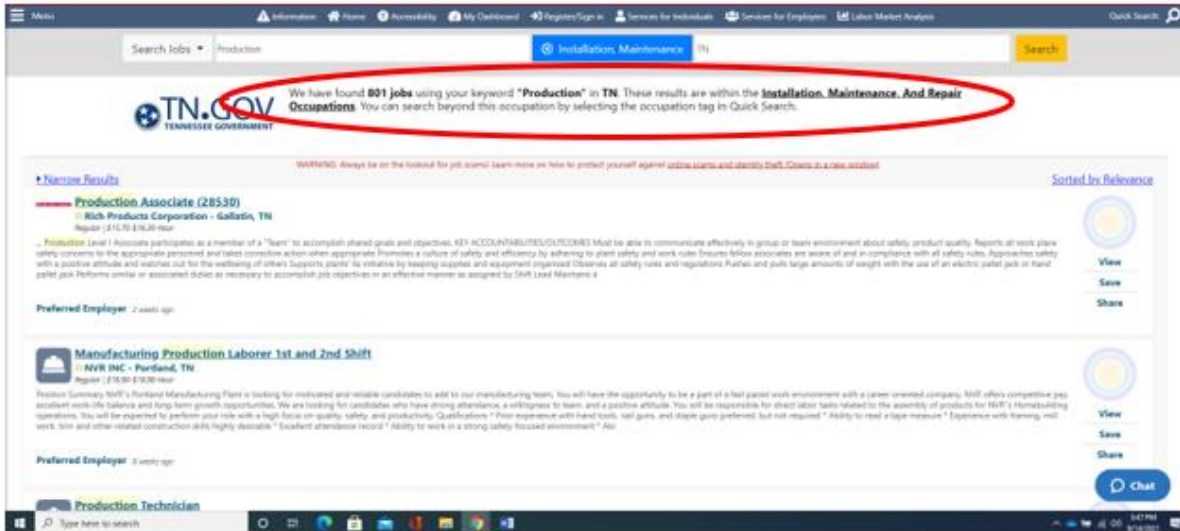
IT Programmer Analyst (FT) Remote Position
Ballad Health - Kingsport, TN
Regner

... Programmer Analyst (FT) Remote Position Job Code: M504000001 Location: *BALLAD-CORPORATE, Kingsport, TN Position Type: Full-time (scheduled 72 hrs or more per pay period) Job Description: SCOPE OF POSITION: IT A Programmer Analyst is predominantly responsible for development and maintenance of applications necessary to meet the needs of Ballad Health. The primary function of the Programmer Analyst is to program, test, debug, and document application programs based upon business requirements and/or detailed specifications. The Programmer Analyst must show initiative, sound judgment and high aptitude for organization and attention to detail. They must possess good verbal and written communication skills, along with the desire to provide exceptional customer service. Above average intelligence is necessary to comprehend and solve problems. In addition, the Programmer Analyst will establish and direct the use of program specifications and standards, ensuring system.

Hospitals - Ballad Health 11 weeks ago

NC Programmer (Masterscam)

800+ Production, Installation, Maintenance and Repair Positions



Search Jobs: Production [Installation, Maintenance, And Repair Occupations] Search

We have found **801 jobs** using your keyword "Production" in TN. These results are within the **Installation, Maintenance, And Repair Occupations**. You can search beyond this occupation by selecting the occupation tag in Quick Search.

WARNING: Always be on the lookout for job scams! Learn more on how to protect yourself against online scams and identity theft. Click on a new account.

Narrow Results Sorted by Relevance

Production Associate (28530)
Rich Products Corporation - Gallatin, TN
Regular - \$15.75 \$16.00 hour

Production Level 1 Associate participates as a member of a "Team" to accomplish shared goals and objectives. KEY ACCOUNTABILITIES/OUTCOMES Must be able to communicate effectively in group or team environment about safety, product quality. Reports all work place safety concerns to the appropriate personnel and takes corrective action when appropriate. Promotes a culture of safety and efficiency by adhering to plant safety and work rules. Ensures fellow associates are aware of and in compliance with all safety rules. Approaches safety with a positive attitude and watches out for the well-being of others. Supports plant's initiative by keeping supplies and equipment organized. Observes all safety rules and regulations. Pushes and pulls large amounts of weight with the use of an electric pallet jack or hand pallet jack. Performs similar or associated duties as necessary to accomplish job objectives in an effective manner as assigned by Shift Lead. Maintains a

Preferred Employer 2 weeks ago

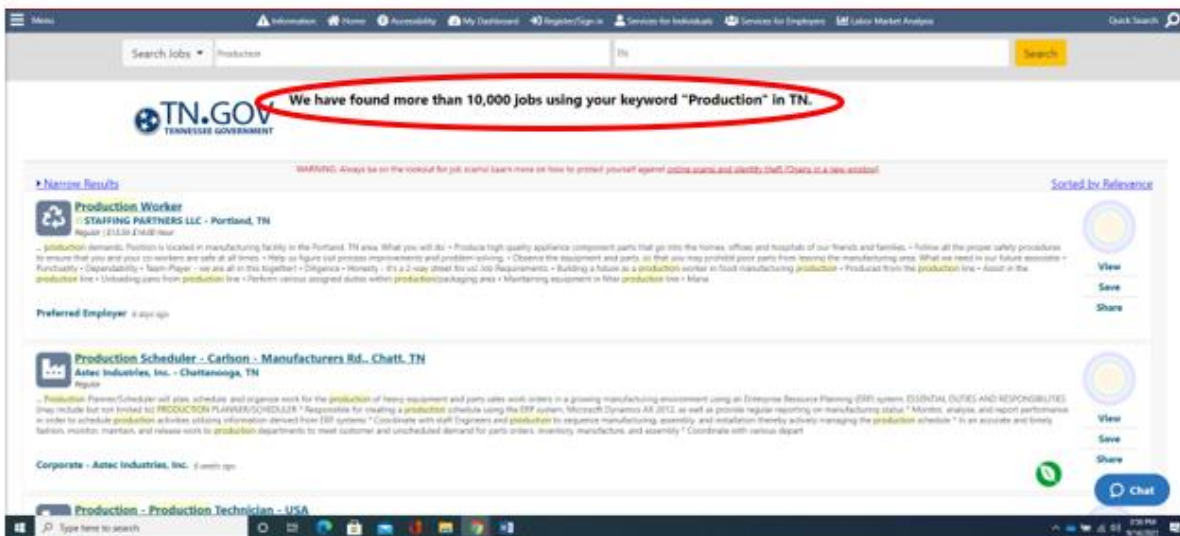
Manufacturing Production Laborer 1st and 2nd Shift
NVR INC - Portland, TN
Regular - \$15.50 \$16.00 hour

Position Summary: NVR's Portland Manufacturing Plant is looking for motivated and reliable candidates to add to our manufacturing team. You will have the opportunity to be a part of a fast paced work environment with a career oriented company. NVR offers competitive job, excellent work-life balance and long-term growth opportunities. We are looking for candidates who have strong attendance, a willingness to learn, and a positive attitude. You will be responsible for direct labor tasks related to the assembly of products for NVR's Homebuilding operations. You will be expected to perform your role with a high focus on quality, safety, and productivity. Qualifications: * Prior experience with hand tools, nail guns, and staple guns preferred, but not required. * Ability to read a tape measure. * Experience with framing, mill work, trim and other related construction skills highly desirable. * Excellent attendance record. * Ability to work in a strong safety focused environment. * Asst

Preferred Employer 8 weeks ago

Production Technician

There were 12,458 General Production Positions



Search Jobs: Production [Production] Search

We have found more than **10,000 jobs** using your keyword "Production" in TN.

WARNING: Always be on the lookout for job scams! Learn more on how to protect yourself against online scams and identity theft. Click on a new account.

Narrow Results Sorted by Relevance

Production Worker
STAFFING PARTNERS LLC - Portland, TN
Regular - \$15.50 \$16.00 hour

production demands. Position is located in manufacturing facility in the Portland, TN area. What you will do: • Produce high quality appliance component parts that go into the homes, offices and hospitals of our friends and families. • Follow all the proper safety procedures to ensure that you and your co-workers are safe at all times. • Help us figure out process improvements and problem-solving. • Cleanse the equipment and parts so that you may produce good parts from leaving the manufacturing area. What we need in our future associate: • Flexibility • Dependability • Team Player - say yes all in this together! • Diligence • Honesty • If a 2-day direct for us! Job Requirements: • Building a future as a production worker in food manufacturing production • Produce from the production line • Assist in the production line • Unloading cars from production line • Perform various assigned duties within production/packaging area • Maintaining equipment on floor production line • More

Preferred Employer 8 days ago

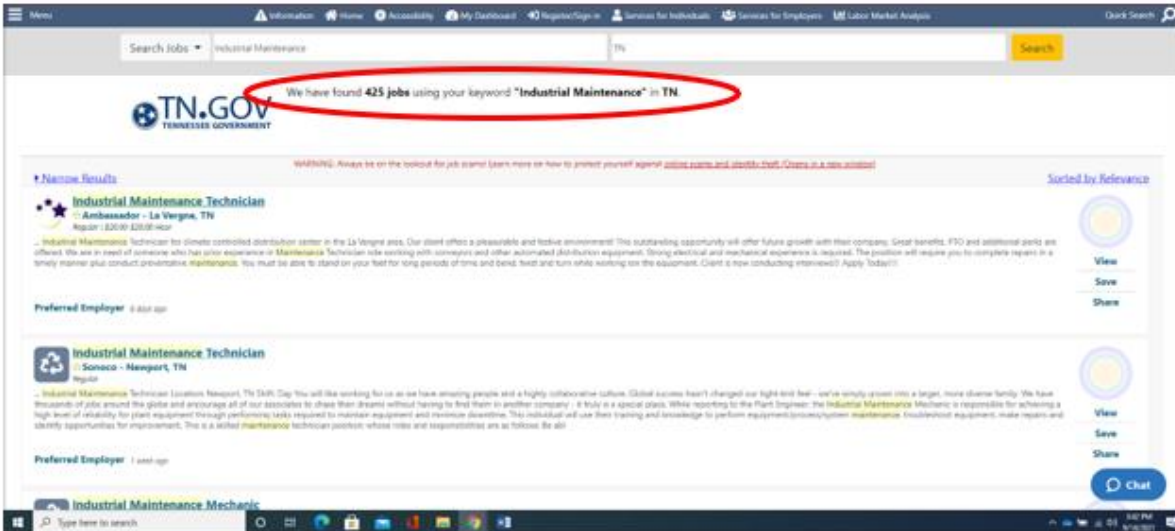
Production Scheduler - Carlson - Manufacturers Rd., Chattanooga, TN
Atec Industries, Inc. - Chattanooga, TN
Regular

Production Planner/Scheduler will plan, schedule and organize work for the production of heavy equipment and parts sales work orders in a growing manufacturing environment using an Enterprise Resource Planning (ERP) system. ESSENTIAL DUTIES AND RESPONSIBILITIES (may include but not limited to) PRODUCTION PLANNER/SCHEDULER * Responsible for creating a production schedule using the ERP system, Microsoft Dynamics AX 2012, as well as provide regular reporting on manufacturing status. * Monitor, analyze, and report performance in order to schedule production activities utilizing information derived from ERP systems. * Coordinate with staff Engineers and production to sequence manufacturing, assembly, and installation thereby actively managing the production schedule. * In an accurate and timely fashion, monitor, maintain, and release work to production departments to meet customer and unscheduled demand for parts orders, inventory, manufacture, and assembly. * Coordinate with various department

Corporate - Atec Industries, Inc. 8 weeks ago

Production - Production Technician - USA

425 Industrial Maintenance



Menu Information Home Accessibility My Dashboard Register/Sign in Services for Individuals Services for Employers Labor Market Analysis Quick Search

Search Jobs Industrial Maintenance TN Search

TN.GOV
TENNESSEE GOVERNMENT

We have found **425 jobs** using your keyword "Industrial Maintenance" in TN.

WARNING: Always be on the lookout for job scams! Learn more on how to protect yourself against [online scams](#) and [identity theft](#). [Close](#) in a new window

Narrow Results Sorted by Relevance

Industrial Maintenance Technician
Ambassador - La Vergne, TN
Regular - \$20.00-\$25.00 Hour

Industrial Maintenance Technician for climate controlled distribution center in the La Vergne area. Our client offers a pleasant and festive environment! This outstanding opportunity will offer future growth with their company. Great benefits, PTO and additional perks are offered. We are in need of someone who has prior experience in **Maintenance** Technician role working with conveyors and other automated distribution equipment. Strong electrical and mechanical experience is required. The position will require you to complete repairs in a timely manner plus conduct preventative **maintenance**. You must be able to stand on your feet for long periods of time and bend, twist and turn while working on the equipment. Client is now conducting interviews! Apply Today!!!

Preferred Employer 6 days ago

Industrial Maintenance Technician
Sonoco - Newport, TN
Regular

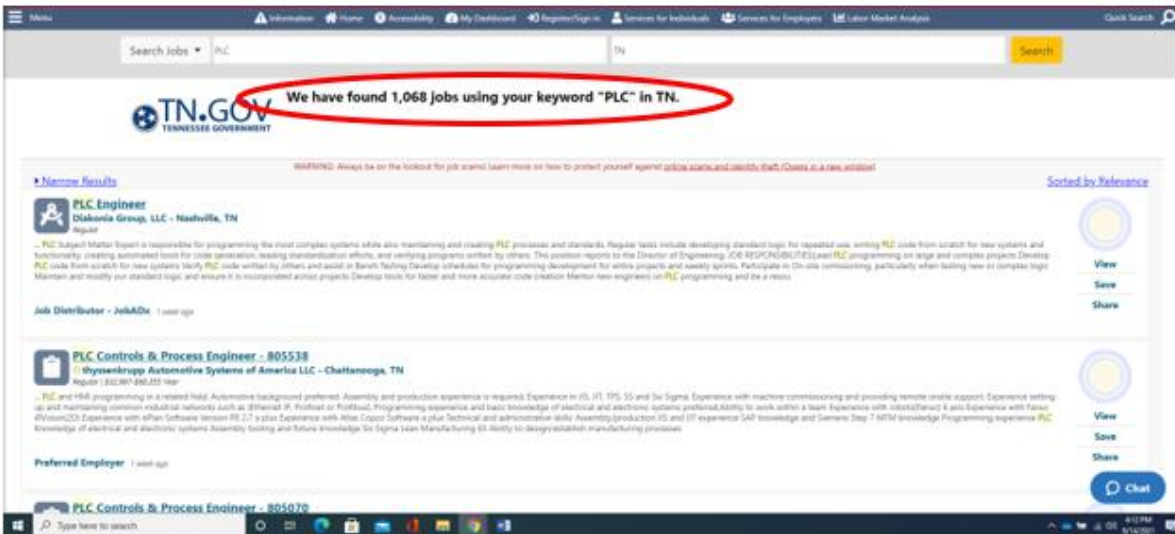
Industrial Maintenance Technician Location: Newport, TN Shift: Day This will be working for us as we have amazing people and a highly collaborative culture. Global success hasn't changed our tight-knit feel - we've simply grown into a larger, more diverse family. We have thousands of jobs around the globe and encourage all of our associates to share their dreams without having to find them in another company - it truly is a special place. While reporting to the Plant Engineer, the **Industrial Maintenance** Mechanic is responsible for achieving a high level of reliability for plant equipment through performing tasks required to maintain equipment and minimize downtime. This individual will use their training and knowledge to perform equipment/pneumatics/maintenance, troubleshoot equipment, make repairs and identify opportunities for improvement. This is a skilled **maintenance** technician position whose roles and responsibilities are as follows: Be able

Preferred Employer 1 week ago

Industrial Maintenance Mechanic

Type here to search

1,000+ PLC Technicians



Menu Information Home Accessibility My Dashboard Register/Sign in Services for Individuals Services for Employers Labor Market Analysis Quick Search

Search Jobs PLC TN Search

TN.GOV
TENNESSEE GOVERNMENT

We have found **1,068 jobs** using your keyword "PLC" in TN.

WARNING: Always be on the lookout for job scams! Learn more on how to protect yourself against [online scams](#) and [identity theft](#). [Close](#) in a new window

Narrow Results Sorted by Relevance

PLC Engineer
Diakonia Group, LLC - Nashville, TN
Regular

PLC Subject Matter Expert is responsible for programming the most complex systems while also maintaining and creating PLC processes and standards. Regular tasks include developing standard logic for repeated use, writing PLC code from scratch for new systems and functionality, creating automated tests for code verification, testing commissioning efforts, and verifying programs written by others. The position reports to the Director of Engineering. **JOB RESPONSIBILITIES** Learn PLC programming on large and complex projects. Develop PLC code from scratch for new systems. Modify PLC code written by others and assist in Service Testing. Develop schedules for programming development for entire projects and weekly reports. Participate in On-site commissioning, particularly when testing new or complex logic. Maintain and modify our standard logic and ensure it is incorporated across projects. Develop tests for faster and more accurate code creation. Mentor new engineers on PLC programming and be a mentor.

Job Distributor - JobAdda 1 week ago

PLC Controls & Process Engineer - 805538
thyssenkrupp Automotive Systems of America LLC - Chattanooga, TN
Regular - \$20.00-\$25.00 Hour

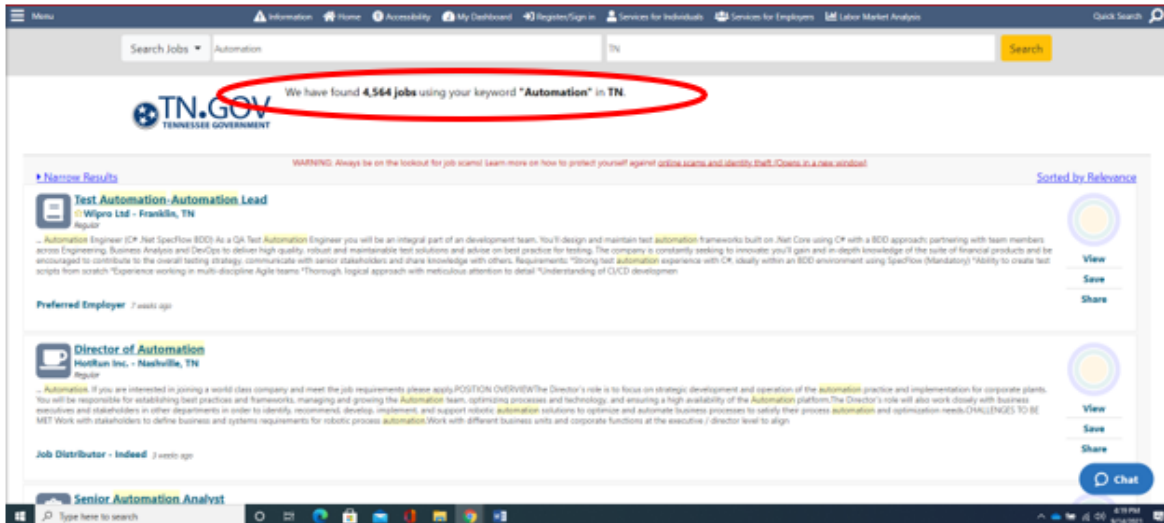
PLC and HMI programming in a related field. Automotive background preferred. Assembly and production experience is required. Experience in RS, IIT, TFS, SS and for Sigma. Experience with machine commissioning and providing remote onsite support. Experience setting up and maintaining common industrial networks such as Ethernet IP, Profinet or Profibus. Programming experience and basic knowledge of electrical and electronic systems preferred. Ability to work within a team. Experience with industrial HMI and experience with Fanuc iWorx/20i Experience with eplan Software Version RS 2.7 in plus Experience with Mitsubishi Copos Software a plus Technical and administrative skills. Assembly/production RS and IIT experience SAP knowledge and Siemens Step 7 HMI knowledge. Programming experience PLC Knowledge of electrical and electronic systems. Assembly testing and future knowledge for Sigma Lean Manufacturing SS. Ability to design/establish manufacturing processes.

Preferred Employer 1 week ago

PLC Controls & Process Engineer - 805538

Type here to search

4,550+ Automation



Search Jobs Automation TN Search

We have found **4,564 jobs** using your keyword "Automation" in TN.

WARNING: Always be on the lookout for job scams! Learn more on how to protect yourself against online scams and identity theft. [Qwera is a new website!](#)

Sorted by Relevance

Test Automation-Automation Lead
Wipro Ltd - Franklin, TN
Regular

Automation Engineer (CP-Net SpecFlow BDD) As a QA Test Automation Engineer you will be an integral part of a development team. You'll design and maintain test automation frameworks built on .Net Core using CP with a BDD approach partnering with team members across Engineering, Business Analysis and DevOps to deliver high quality, robust and maintainable test solutions and advise on best practice for testing. The company is constantly seeking to innovate you'll gain and in-depth knowledge of the suite of financial products and be encouraged to contribute to the overall testing strategy, communicate with senior stakeholders and share knowledge with others. Requirements: "Strong test automation experience with CP, ideally within an BDD environment using SpecFlow (Mandatory) "Ability to create test scripts from scratch "Experience working in multi-discipline Agile teams "Thorough, logical approach with meticulous attention to detail "Understanding of CI/CD development

Preferred Employer 7 weeks ago

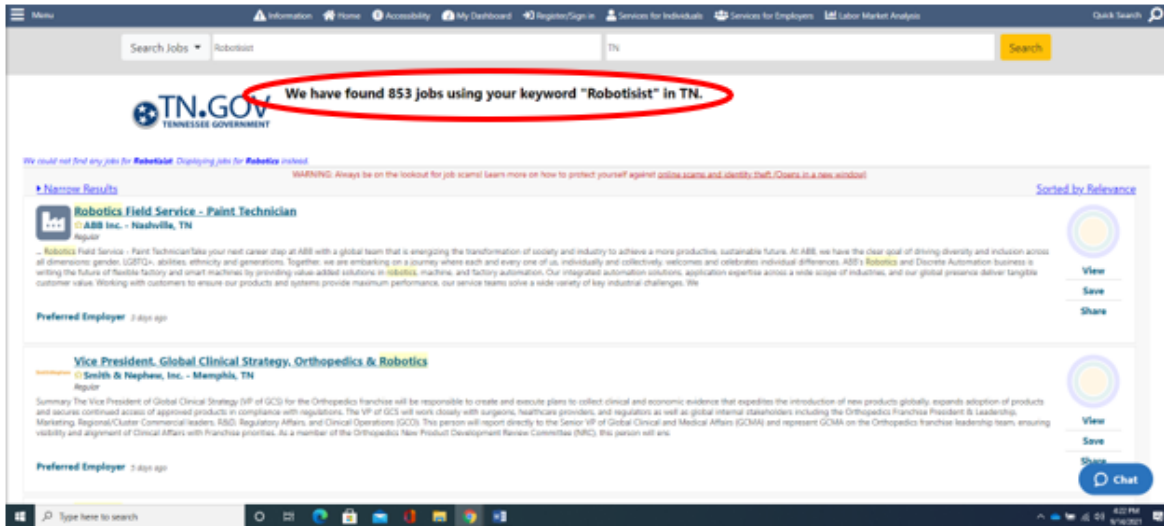
Director of Automation
Hufkin Inc. - Nashville, TN
Regular

Automation. If you are interested in joining a world class company and meet the job requirements please apply. POSITION OVERVIEW: The Director's role is to focus on strategic development and operation of the automation practice and implementation for corporate clients. You will be responsible for establishing best practices and frameworks, managing and growing the Automation team, optimizing processes and technology, and ensuring a high availability of the Automation platform. The Director's role will also work closely with business executives and stakeholders in other departments in order to identify, recommend, develop, implement, and support robotic automation solutions to optimize and automate business processes to satisfy their process automation and optimization needs. CHALLENGES TO BE MET: Work with stakeholders to define business and systems requirements for robotic process automation. Work with different business units and corporate functions at the executive / director level to align

Job Distributor - Indeed 3 weeks ago

Senior Automation Analyst

850+ Robotists



Search Jobs Robotist TN Search

We have found **853 jobs** using your keyword "Robotist" in TN.

WARNING: Always be on the lookout for job scams! Learn more on how to protect yourself against online scams and identity theft. [Qwera is a new website!](#)

Sorted by Relevance

Robotics Field Service - Paint Technician
ABB Inc. - Nashville, TN
Regular

Robotics Field Service - Paint Technician Take your next career step at ABB with a global team that is pioneering the transformation of society and industry to achieve a more productive, sustainable future. At ABB, we have the clear goal of driving diversity and inclusion across all dimensions: gender, LGBTQ+, abilities, ethnicity and generations. Together, we are embarking on a journey where each and every one of us, individually and collectively, welcomes and celebrates individual differences. ABB's Robotics and Discrete Automation business is writing the future of flexible factory and smart machines by providing value-added solutions in robotics, machine, and factory automation. Our integrated automation solutions, application expertise across a wide scope of industries, and our global presence deliver tangible customer value. Working with customers to ensure our products and systems provide maximum performance, our service teams solve a wide variety of key industrial challenges. We

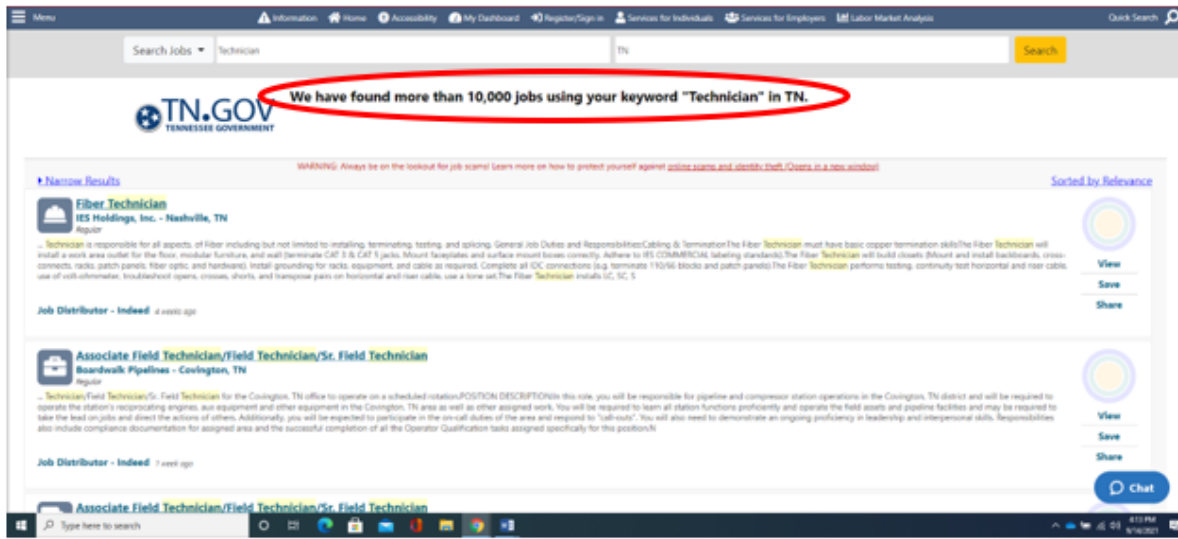
Preferred Employer 3 days ago

Vice President, Global Clinical Strategy, Orthopedics & Robotics
Smith & Nephew, Inc. - Memphis, TN
Regular

Summary: The Vice President of Global Clinical Strategy (VP of GCS) for the Orthopedics franchise will be responsible to create and execute plans to collect clinical and economic evidence that expedites the introduction of new products globally, expands adoption of products and secures continued access of approved products in compliance with regulations. The VP of GCS will work closely with surgeons, healthcare providers, and regulators as well as global internal stakeholders including the Orthopedics Franchise President & Leadership, Marketing, Regional/Cluster Commercial leaders, R&D, Regulatory Affairs, and Clinical Operations (CCO). This person will report directly to the Senior VP of Global Clinical and Medical Affairs (GCM&A) and represent GCM&A on the Orthopedics franchise leadership team, ensuring visibility and alignment of Clinical Affairs with Franchise priorities. As a member of the Orthopedics New Product Development Review Committee (NPDC), this person will also

Preferred Employer 7 days ago

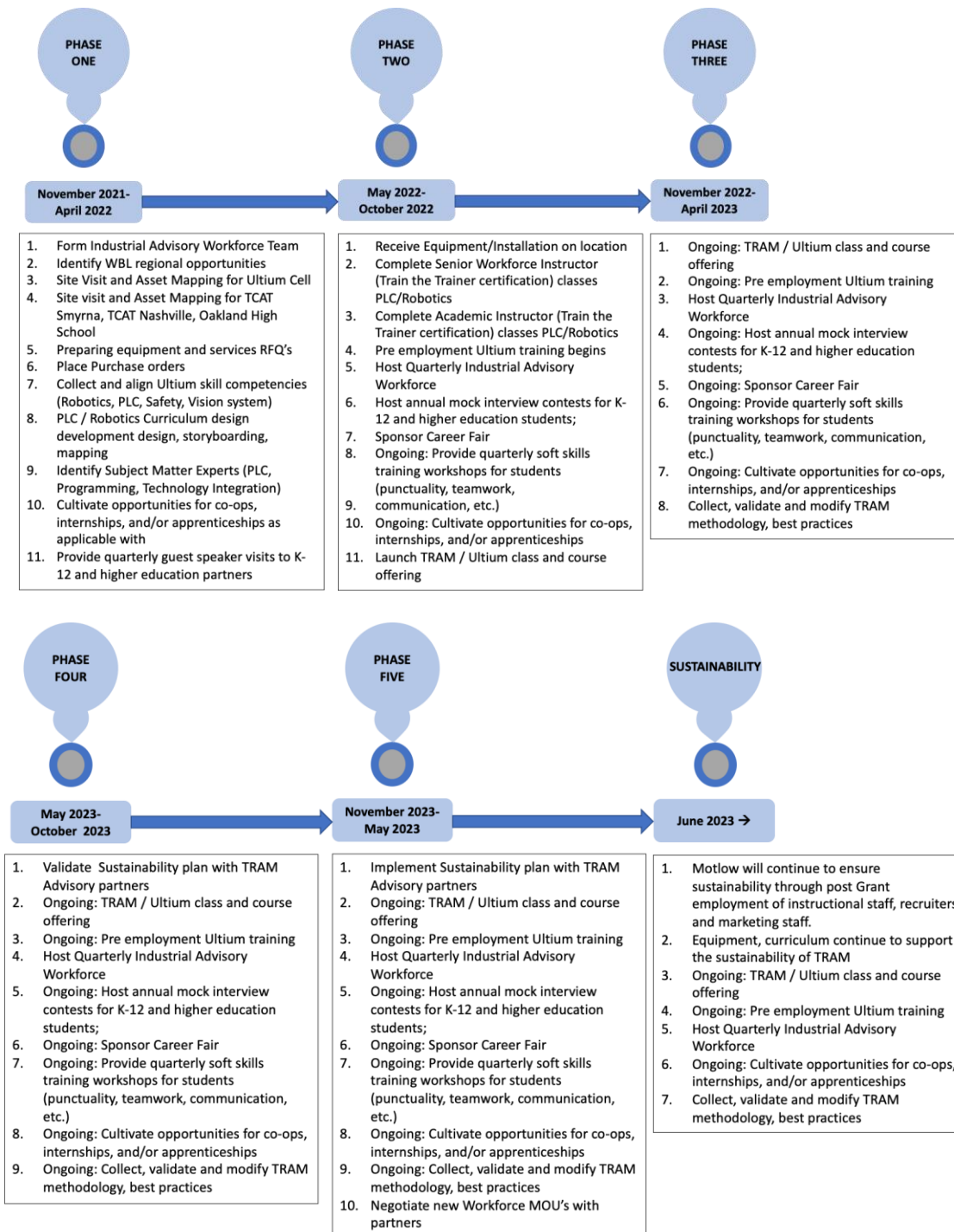
10,000+ Technicians



The screenshot shows the TN.GOV job search interface. At the top, there is a navigation bar with links for Information, Home, Accessibility, My Dashboard, Register/Sign in, Services for Individuals, Services for Employers, and Labor Market Analysis. A search bar contains the keyword 'Technician' and the location 'TN'. A red circle highlights a message: 'We have found more than 10,000 jobs using your keyword "Technician" in TN.' Below this, the results are sorted by Relevance. The first job listing is for 'Fiber Technician' at IES Holdings, Inc. in Nashville, TN, with a description of responsibilities and a 'Job Distributor - Indeed' badge. The second job listing is for 'Associate Field Technician/Field Technician/Sr. Field Technician' at Boardwalk Pipelines in Covington, TN, also with a 'Job Distributor - Indeed' badge. A 'Chat' button is visible in the bottom right corner.

Appendix C

Detailed Project Timeline



Appendix D

Partner Memorandums of Understanding

Memorandum of Understanding

between

Motlow State Community College

and

Ultium Cells LLC

This Memorandum of Understanding (MOU) sets forth the terms and understanding between Motlow State Community College and the Ultium Cells LLC who are partnering to support to the Governor's Investment in Vocational Education (GIVE) 2.0 grant program.

Partner name: Motlow State Community College (Herein after MSCC)

Partner representative: Larry Flatt

Position: Project Director

Address: 225 Vo-tech Drive, McMinnville, 37110

Telephone: 931-205-4436

E-mail: lflatt@mscc.edu

Partner name: Ultium Cells LLC

Partner representative: Kelly Rucker

Position: HR Director

Address: 301 Donald F Ephlin Pkwy, Spring Hill, TN 37174

Telephone: 731-202-6434

E-mail: Kelly.1.rucker@gm.com

Purpose

The purpose of this MOU is to establish an agreement between the above-mentioned parties concerning their respective roles and responsibilities for implementation of a GIVE 2.0 grant. This agreement is to establish and coordinate joint processes and procedures for the provision of the GIVE 2.0 program.

Governor's Investment in Vocational Education (GIVE) 2.0 Vision and Overview

Since the MOU is intended to describe and detail how partners will contribute to the establishment and maintenance of the GIVE 2.0 program, it is important that all partners to the MOU share a collective vision for the program and have a common understanding as to the scope and purpose of the program.

The description provided under this section will serve as a critical framework for the program as it makes decisions on the implementation of the GIVE 2.0 grant project:

Duties of Parties

In this section, the responsibilities and agreements of each party is described separately.

For the lead agency, MSCC, the responsibilities and agreements could include any or all of the following, as applicable:

- *Serve as the fiscal agent for the grant;*
- *Provide needed support including office space, telephone use, and computer use to carry out the administrative duties of the grant;*
- *Provide classroom space and other appropriate space to accommodate the program;*
- *Be responsible for purchasing necessary materials/supplies/equipment for designated components in accordance with the grant budget;*
- *Support staff in trainings and professional development opportunities in areas related to programming and issues;*
- *Complete paperwork related to any association with the program;*
- *Provide access to assessment and other available data for the purposes of program evaluation;*
- *Assist the program in developing, implementing, and making progress on its sustainability plan;*
- *Recruit and refer students to the GIVE 2.0 program work;*
- *Participate on the Advisory Team;*

For an Employer/Industry partner, the following apply:

- *Provide opportunities for students of the program, especially where work-based learning experiences are concerned to include but not limited to:*
- *Provide quarterly guest speaker visits to K-12 and higher education partners throughout the grant term;*
- *Host annual mock interview contests for K-12 and higher education students;*
- *Sponsor minimum of 1 Career Fair annually over the grant term;*
- *Provide quarterly soft skills training workshops for students (punctuality, teamwork, communication, etc.)*
- *Cultivate opportunities for co-ops, internships, and/or apprenticeships as applicable with Lead Entity;*
- *Communicate and collaborate with all partners about rules, expectations, and norms;*
- *Complete requested documentation related to and associated with the program within a timely manner including monthly progress/activity reports, quarterly invoices (if applicable) and all other project items as requested by Motlow State;*
- *Assist the program in developing, implementing, and making progress on its sustainability and contingency/succession plans;*
- *Participate on the Advisory Team through consistent meeting attendance.*

Meetings

All major administrative decisions concerning the GIVE 2.0 program shall be brought to the Advisory Team. The Advisory Team consists of TCAT Nashville, TCAT Murfreesboro, Oakland High School, I 4.0 Strategies, Rutherford County Chamber, and Motlow State Community College, and the Program Director, Larry Flatt. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Team will meet at least two times per year, or as needed, about key decisions and issues related to successful program implementation. The Program Director will oversee and make all day-to-day decisions, in consultation with the program staff, when appropriate, for the operations of the program. If partners cannot come to a mutual agreement, the lead agency, MSCC, will have final decision-making authority.

Duration

The agreement is for a period of 30 months beginning with the execution of a grant contract with a preference for extending into a long-term alliance to foster skills training and workforce development needs.

Procedures for Modification and Termination

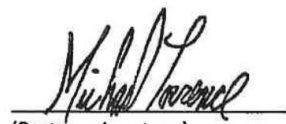
- The MOU may be modified, revised, extended, or renewed by mutual written consent of all parties, by the issuance of a written amendment, signed and dated by all parties. Submission of a revised MOU requires a program amendment to be submitted to the state coordinator for approval.
- Any party of the MOU may terminate their participation in this MOU by giving written notice of intent to terminate to each of the partners. In such case, termination by one or more of the parties to this MOU does not alter the terms or obligations of the other parties to this MOU.
- An individual partners' participation in the GIVE program may be terminated for non-compliance with the MOU provided the other parties provide written notice clearly outlining the reasons for the termination.

Severance Clause

If any part of this agreement becomes unenforceable or illegal, then the agreement will continue in force, but the offending provision(s) shall be severed from the agreement and will have no effect on the remaining services agreed to and associated performance.

Signatures

All partners in this agreement sign to confirm their acceptance of its terms by their signature.




(Partner signature)

Michael Torrence

President

Motlow State Community College

Date: 9/13/2021



(Partner signature)

Thomas Gallagher III

Vice President of Operations

Ultium Cells LLC

Date: 9/13/2021

Memorandum of Understanding

between

Motlow State Community College

and

Rutherford County Chamber of Commerce & Rutherford Works

This Memorandum of Understanding (MOU) sets forth the terms and understanding between Motlow State Community College and RCCOC and Rutherford Works who are partnering to support to the Governor's Investment in Vocational Education (GIVE) 2.0 grant program.

Partner name: Motlow State Community College

Partner representative: Larry Flatt

Position: Project Director

Address: 225 Vo-tech Drive, McMinnville, TN 37110

Telephone: 931-393-1720

E-mail: lflatt@mscc.edu

Partner name: Rutherford County Chamber of Commerce & Rutherford Works

Partner representative: Paul Latture

Position: President

Address: 3050 Medical Center Parkway

Telephone: 615-893-6565

E-mail: platture@rutherfordchamber.org

Purpose

The purpose of this MOU is to establish an agreement between the above-mentioned parties concerning their respective roles and responsibilities for implementation of a GIVE 2.0 grant.

This agreement is to establish and coordinate joint processes and procedures for the provision of the GIVE 2.0 program.

Governor's Investment in Vocational Education (GIVE) 2.0 Vision and Overview

Since the MOU is intended to describe and detail how partners will contribute to the establishment and maintenance of the GIVE 2.0 program, it is important that all partners to the MOU share a collective vision for the program and have a common understanding as to the scope and purpose of the program.

The description provided under this section will serve as a critical framework for the program as it makes decisions on the implementation of the GIVE 2.0 grant project:

Duties of Parties

In this section, the responsibilities and agreements of each party is described separately.

For the **lead agency, MSCC**, the responsibilities and agreements could include:

- ☐ *Serve as the fiscal agent for the grant;*
- ☐ *Provide needed support including office space, telephone use, and computer use to carry out the administrative duties of the grant;*
- ☐ *Provide classroom space and other appropriate space to accommodate the program;*
- ☐ *Be responsible for purchasing necessary materials/supplies/equipment for designated components in accordance with the grant budget;*
- ☐ *Support staff in trainings and professional development opportunities in areas related to programming and issues;*
- ☐ *Complete paperwork related to any association with the program;*
- ☐ *Provide access to assessment and other available data for the purposes of program evaluation;*
- ☐ *Assist the program in developing, implementing, and making progress on its sustainability plan;*
- ☐ *Recruit and refer students to the GIVE 2.0 program work;*
- ☐ *Participate on the Advisory Team; and/or*
- ☐ *Other:*

For a **Workforce partner**, the following may apply:

- ☒ ☐ *Communicate and collaborate with all partners about rules, expectations, and norms;*
- ☒ ☐ *Complete requested documentation related to and associated with the program within a timely manner;*
- ☒ ☐ *Participate on the Advisory Team; and/or*
- ☒ ☐ *Other: Serve as a conduit of information between education partners and industry partners to ensure local manufacturing companies are familiar with opportunities to connect with students for work-based learning, internships and full- time employment.*

Meetings

All major administrative decisions concerning the GIVE 2.0 program shall be brought to the Advisory Team. The Advisory Team consists of TCAT Nashville, TCAT Murfreesboro, Oakland High School, I 4.0 Strategies, Rutherford County Chamber, and Motlow State Community College, and the Program Director. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Team will meet at least two times per year, or as needed, about key decisions and issues related to successful program implementation. The Program Director will oversee and make all day-to-day decisions, in consultation with the program staff, when appropriate, for the operations of the program. If partners cannot come to a mutual agreement, the lead agency, MSCC, will have final decision-making authority.

Funding

The partner will not be responsible for contributing any funding to the project as the grant budget will provide all funding for the project.

Duration

The agreement is for a period of 30 months beginning with the execution of a grant contract with a preference for extending into a long-term alliance to foster skills training and workforce development needs.

Procedures for Modification and Termination


- The MOU may be modified, revised, extended, or renewed by mutual written consent of all parties, by the issuance of a written amendment, signed and dated by all parties. Submission of a revised MOU requires a program amendment to be submitted to the state coordinator for approval.
- Any party of the MOU may terminate their participation in this MOU by giving written notice of intent to terminate to each of the partners. In such case, termination by one or more of the parties to this MOU does not alter the terms or obligations of the other parties to this MOU.
- An individual partners' participation in the GIVE program may be terminated for non-compliance with the MOU provided the other parties provide written notice clearly outlining the reasons for the termination.

Severance Clause

If any part of this agreement becomes unenforceable or illegal, then the agreement will continue in force, but the offending provision(s) shall be severed from the agreement and will have no effect on the remaining services agreed to and associated performance.

Signatures

All partners in this agreement sign to confirm their acceptance of its terms by their signature.


(Partner signature)
Michael Torrence
President
Motlow State Community College
Date:


(Partner signature)
Paul Latture
President
Rutherford County Chamber of Commerce
Date: September 9, 2021

Memorandum of Understanding

between

Motlow State Community College

and

I4.0 Strategies, LLC.

This Memorandum of Understanding (MOU) sets forth the terms and understanding between Motlow State Community College and the I4.0 Strategies, LLC. who are partnering to support to the Governor's Investment in Vocational Education (GIVE) 2.0 grant program.

Partner name: Motlow State Community College

Partner representative: Larry Flatt

Position: Project Director

Address: 225 Vo-tech Drive, McMinnville, TN 37110

Telephone: 931-393-1720

E-mail: lflatt@mscc.edu

Partner name: I4.0 Strategies, LLC.

Partner representative: Robert Graff

Position: President

Address: 167 Shoemaker Drive Loveland, Ohio 45140

Telephone: 513-410-6509

E-mail: bgraff@i40strategies.com

Purpose

The purpose of this MOU is to establish an agreement between the above-mentioned parties concerning their respective roles and responsibilities for implementation of a GIVE 2.0 grant.

This agreement is to establish and coordinate joint processes and procedures for the provision of the GIVE 2.0 program.

Governor's Investment in Vocational Education (GIVE) 2.0 Vision and Overview

Since the MOU is intended to describe and detail how partners will contribute to the establishment and maintenance of the GIVE 2.0 program, it is important that all partners to the MOU share a collective vision for the program and have a common understanding as to the scope and purpose of the program.

The description provided under this section will serve as a critical framework for the program as it makes decisions on the implementation of the GIVE 2.0 grant project:

Duties of Parties

In this section, the responsibilities and agreements of each party is described separately.

For the **lead agency, MSCC**, the responsibilities and agreements could include:

- ☐ *Serve as the fiscal agent for the grant;*
- ☐ *Provide needed support including office space, telephone use, and computer use to carry out the administrative duties of the grant;*
- ☐ *Provide classroom space and other appropriate space to accommodate the program;*
- ☐ *Be responsible for purchasing necessary materials/supplies/equipment for designated components in accordance with the grant budget;*
- ☐ *Support staff in trainings and professional development opportunities in areas related to programming and issues;*
- ☐ *Complete paperwork related to any association with the program;*
- ☐ *Provide access to assessment and other available data for the purposes of program evaluation;*
- ☐ *Assist the program in developing, implementing, and making progress on its sustainability plan;*
- ☐ *Recruit and refer students to the GIVE 2.0 program work;*
- ☐ *Participate on the Advisory Team; and/or*
- ☐ *Other:*

For a **Workforce partner**, the following may apply:

- ☐ *Provide guidance and/or development of training curriculum;*
- ☐ *The design of academic trainers;*
- ☐ *Competitive bidding of products and services*
- ☐ *Investigating/recommending alternate sources of training equipment;*
- ☐ *Promote and cultivate internships and/or apprenticeships;*
- ☐ *Investigate and map the Ohio training matrix*
- ☐ *Assist in planning/developing project oversight;*
- ☐ *Communicate and collaborate with all partners about rules, expectations, and norms;*
- ☐ *Complete requested documentation related to and associated with the program within a timely manner;*
- ☐ *Assist the program in developing, implementing, and making progress on its sustainability and contingency plans;*
 - ☐ *Participate on the Advisory Team; and/or*
 - ☐ *Other:*

Meetings

All major administrative decisions concerning the GIVE 2.0 program shall be brought to the Advisory Team. The Advisory Team consists of TCAT Nashville, TCAT Murfreesboro, Oakland High School, I 4.0 Strategies, Rutherford County Chamber, and Motlow State Community College, and the Program Director. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Team will meet at least two times per year, or as

needed, about key decisions and issues related to successful program implementation. The Program Director will oversee and make all day-to-day decisions, in consultation with the program staff, when appropriate, for the operations of the program. If partners cannot come to a mutual agreement, the lead agency, MSCC, will have final decision-making authority.

Funding

The partner will not be responsible for contributing any funding to the project as the grant budget will provide all funding for the project.

Duration

The agreement is for a period of 30 months beginning with the execution of a grant contract with a preference for extending into a long-term alliance to foster skills training and workforce development needs.

Procedures for Modification and Termination

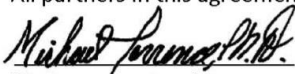
- The MOU may be modified, revised, extended, or renewed by mutual written consent of all parties, by the issuance of a written amendment, signed and dated by all parties. Submission of a revised MOU requires a program amendment to be submitted to the state coordinator for approval.
- Any party of the MOU may terminate their participation in this MOU by giving written notice of intent to terminate to each of the partners. In such case, termination by one or more of the parties to this MOU does not alter the terms or obligations of the other parties to this MOU.
- An individual partners' participation in the GIVE program may be terminated for non-compliance with the MOU provided the other parties provide written notice clearly outlining the reasons for the termination.

Severance Clause

If any part of this agreement becomes unenforceable or illegal, then the agreement will continue in force, but the offending provision(s) shall be severed from the agreement and will have no effect on the remaining services agreed to and associated performance.

Signatures

All partners in this agreement sign to confirm their acceptance of its terms by their signature.



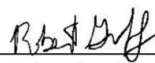
(Partner signature)

Michael Torrence

President

Motlow State Community College

Date:



(Partner signature)

Partner Printed Name Robert Graff

Position President

Organization I4.0 Strategies, LLC

Date: 09-08-2021

Memorandum of Understanding

between

Motlow State Community College

and

Higher Education - TCAT Nashville

This Memorandum of Understanding (MOU) sets forth the terms and understanding between Motlow State Community College and the TCAT Nashville who are partnering to support to the Governor's Investment in Vocational Education (GIVE) Grant 2.0 program.

Partner name: Motlow State Community College

Partner representative: Larry Flatt

Position: Dean of Career Readiness

Address: 225 Vo-tech Drive, McMinnville, TN 37110

Telephone: 931-393-1720

E-mail: lflatt@mscc.edu

Partner name: Tennessee College of Applied Technology Nashville

Partner representative: Jerry King

Position: Vice President

Address: 100 White Bridge Road, Nashville, TN. 37209

Telephone: 615-425-5530

Fax: 615-425-5582

E-mail: jerry.king@tcatnashville.edu

Purpose

The purpose of this MOU is to establish an agreement between the above-mentioned parties concerning their respective roles and responsibilities for implementation of a GIVE 2.0 grant. This agreement is to establish and coordinate joint processes and procedures for the provision of the GIVE 2.0 grant program for students, staff development, supervision, and program evaluation.

Governor's Investment in Vocational Education 2.0 Vision and Overview

Since the MOU is intended to describe and detail how partners will contribute to the establishment and maintenance of the GIVE 2.0 program, it is important that all partners to the MOU share a collective vision for the program and have a common understanding as to the scope and purpose of the program.

The description provided under this section will serve as a critical framework for the program as it makes decisions on the implementation of the GIVE 2.02.0 project:

Duties of Parties

In this section, the responsibilities and agreements of each party is described separately.

For the lead agency, MSCC, the responsibilities and agreements include (as defined by the grant mission):

- *Serve as the fiscal agent for the grant.*
- *Provide needed support including office space, telephone use, and computer use to carry out the administrative duties of the GIVE 2.0 grant.*
- *Provide classroom space and other appropriate space to accommodate the GIVE 2.0 program.*
- *Be responsible for purchasing necessary materials/supplies/equipment for designated components in accordance with the GIVE 2.0 grant budget.*
- *Support staff in trainings and professional development opportunities in areas related to programming and issues.*
- *Complete paperwork related to any association with the program.*
- *Provide access to assessment and other available data for the purposes of program evaluation.*
- *Assist the program in developing, implementing, and making progress on its sustainability plan.*
- *Recruit and refer students to the GIVE 2.0 program work.*
- *Participate on the Advisory Team*

For the school partner, the following may apply in part or in whole (as defined by the grant mission):

- *Provide classroom space and all other appropriate space to accommodate the GIVE 2.0 program.*
- *Recruit and refer students to the GIVE 2.0 work-based learning program.*
- *Communicate and collaborate with all partners.*
- *Support the GIVE 2.0 program in developing appropriate curricula and helping to establish clear linkages with industry demand.*
- *Establish a collaborative relationship with MSCC faculty and staff including having your school's staff committed to working in the program.*
- *Complete paperwork related to and associated with the program within a timely manner.*
- *Provide access to assessment and other available data for the purposes of program evaluation.*
- *Assist the program in developing, implementing, and making progress on its sustainability plan.*
- *Participate on the Advisory Team*

Meetings

All major administrative decisions concerning the GIVE 2.0 program shall be brought to the Advisory Team. The Advisory Team consists of TCAT Nashville, TCAT Murfreesboro, Oakland High School, I 4.0 Strategies, Motlow State Community College and the Program Director, Larry Flatt. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Team will meet at least two times per year, or as needed, about key decisions and issues related to successful program implementation. The Program Director will oversee and make all day-to-day decisions, in consultation with the program staff, when appropriate, for the operations of the program. If partners cannot come to a mutual agreement, the lead agency, MSCC, will have final decision-making authority.

Funding

No funds will be provided by partners as grant budget will provide for all costs associated with the project.

Duration

The agreement is for a period of 30 months beginning with the execution of a grant contract and a preference for maintaining a long-term alliance to help provide skills training and meet industry workforce needs.

Procedures for Modification and Termination

- The MOU may be modified, revised, extended, or renewed by mutual written consent of all parties, by the issuance of a written amendment, signed and dated by all parties. Submission of a revised MOU requires a program amendment to be submitted to the state coordinator for approval.
- Any party of the MOU may terminate their participation in this MOU by giving written notice of intent to terminate to each of the partners. In such case, termination by one or more of the parties to this MOU does not alter the terms or obligations of the other parties to this MOU.
- An individual partners' participation in the GIVE 2.0 grant program may be terminated for non-compliance with the MOU provided the other parties provide written notice clearly outlining the reasons for the termination.

Severance Clause

If any part of this agreement becomes unenforceable or illegal, then the agreement will continue in force, but the offending provision(s) shall be severed from the agreement and will have no effect on the remaining services agreed to and associated performance.



MOTLOW STATE
COMMUNITY COLLEGE

Signatures

All partners in this agreement sign to confirm their acceptance of its terms by their signature.

(Partner signature)

Michael Torrence

President

Motlow State Community College

Date: 14 Sept 2021

(Partner signature)

Jerry King

Vice President

Organization: TCAT Nashville

Date: 14 Sept 2021

Memorandum of Understanding

between

Motlow State Community College

and

Higher Education Partner: Tennessee College of Applied Technology-
Murfreesboro

This Memorandum of Understanding (MOU) sets forth the terms and understanding between Motlow State Community College and the (partner) who are partnering to support to the Governor's Investment in Vocational Education (GIVE) Grant 2.0 program.

Partner name: Motlow State Community College

Partner representative: Larry Flatt

Position: Dean of Career Readiness

Address: 225 Vo-tech Drive, McMinnville, TN 37110

Telephone: 931-393-1720

E-mail: lflatt@mscc.edu

Partner name: Tennessee College of Applied Technology- Murfreesboro

representative: Jeff Holmes

Position: Special Industry Coordinator

Address: 1303 Old Fort Parkway , Murfreesboro, TN 37130

Telephone: 615-898-8010

Fax: _____

E-mail: jholmes@tcatmurfreesboro.edu

Purpose

The purpose of this MOU is to establish an agreement between the above-mentioned parties concerning their respective roles and responsibilities for implementation of a GIVE 2.0 grant. This agreement is to establish and coordinate joint processes and procedures for the provision of the GIVE 2.0 grant program for students, staff development, supervision, and program evaluation.

Governor's Investment in Vocational Education 2.0 Vision and Overview

Since the MOU is intended to describe and detail how partners will contribute to the establishment and maintenance of the GIVE 2.0 program, it is important that all partners to the MOU share a collective vision for the program and have a common understanding as to the scope and purpose of the program.

The description provided under this section will serve as a critical framework for the program as it makes decisions on the implementation of the GIVE 2.02.0 project:

Duties of Parties

In this section, the responsibilities and agreements of each party is described separately.

For the **lead agency, MSCC**, the responsibilities and agreements include:

- ☐ *Serve as the fiscal agent for the grant.*
- ☐ *Provide needed support including office space, telephone use, and computer use to carry out the administrative duties of the GIVE 2.0 grant.*
- ☐ *Provide classroom space and other appropriate space to accommodate the GIVE 2.0 program.*
- ☐ *Be responsible for purchasing necessary materials/supplies/equipment for designated components in accordance with the GIVE 2.0 grant budget.*
- ☐ *Support staff in trainings and professional development opportunities in areas related to programming and issues.*
- ☐ *Complete paperwork related to any association with the program.*
- ☐ *Provide access to assessment and other available data for the purposes of program evaluation.*
- ☐ *Assist the program in developing, implementing, and making progress on its sustainability plan.*
- ☐ *Recruit and refer students to the GIVE 2.0 program work.*
- ☐ *Participate on the Advisory Team; and/or*
- ☐ *Other:*

For the **school partner**, the following may apply:

- ☐ *Provide classroom space and all other appropriate space to accommodate the GIVE 2.0 program, as available.*
- ☐ *Recruit and refer students to the GIVE 2.0 work-based learning program.*
- ☐ *Communicate and collaborate with all partners.*
- ☐ *Support the GIVE 2.0 program in developing appropriate curricula and helping to establish clear linkages with industry demand.*
- ☐ *Establish a collaborative relationship with MSCC faculty and staff including having your school's staff committed to working in the program.*
- ☐ *Complete paperwork related to and associated with the program within a timely manner.*
- ☐ *Provide access to assessment and other available data for the purposes of program evaluation.*
- ☐ *Assist the program in developing, implementing, and making progress on its sustainability plan.*
- ☐ *Participate on the Advisory Team; and/or*
- ☐ *Other:*

Meetings

All major administrative decisions concerning the GIVE 2.0 program shall be brought to the Advisory Team. The Advisory Team consists of TCAT Nashville, TCAT Murfreesboro, Oakland High School, I 4.0 Strategies, Motlow State Community College and the Program Director. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Team will meet at least two times per year, or as needed, about key decisions and issues related to successful program implementation. The Program Director will oversee and make all day-to-day decisions, in consultation with the program staff, when appropriate, for the operations of the program. If partners cannot come to a mutual agreement, the lead agency, MSCC, will have final decision-making authority.

Funding

No funds will be provided by partners as grant budget will provide for all costs associated with the project.

Duration

The agreement is for a period of 30 months beginning with the execution of a grant contract and a preference for maintaining a long-term alliance to help provide skills training and meet industry workforce needs.

Procedures for Modification and Termination

- The MOU may be modified, revised, extended, or renewed by mutual written consent of all parties, by the issuance of a written amendment, signed and dated by all parties. Submission of a revised MOU requires a program amendment to be submitted to the state coordinator for approval.
- Any party of the MOU may terminate their participation in this MOU by giving written notice of intent to terminate to each of the partners. In such case, termination by one or more of the parties to this MOU does not alter the terms or obligations of the other parties to this MOU.
- An individual partners' participation in the GIVE 2.0 grant program may be terminated for non-compliance with the MOU provided the other parties provide written notice clearly outlining the reasons for the termination.

Severance Clause

If any part of this agreement becomes unenforceable or illegal, then the agreement will continue in force, but the offending provision(s) shall be severed from the agreement and will have no effect on the remaining services agreed to and associated performance.

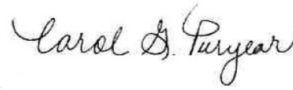
Signatures

All partners in this agreement sign to confirm their acceptance of its terms by their signature.



(Partner signature)
Michael Torrence
President
Motlow State Community College

Date:



(Partner signature)
Carol G. Puryear
President
TN College of Applied Technology-
Murfreesboro
Date: 09142021

Memorandum of Understanding

between

Motlow State Community College

and

School System: Rutherford County Schools

This Memorandum of Understanding (MOU) sets forth the terms and understanding between Motlow State Community College and the Rutherford County Schools who are partnering to support to the Governor's Investment in Vocational Education (GIVE) grant program.

Partner name: Motlow State Community College

Partner representative: Larry Flatt

Position: Dean of Career Readiness

Address: 225 Vo-tech Drive, McMinnville, TN 37110

Telephone: 931-393-1720

E-mail: lflatt@mscc.edu

Partner name: Oakland High School – Rutherford County Schools

Partner representative: John Marshall – Tyra Pilgrim

Position: Principal – CTE Director

Address: 2225 Patriot Drive, Murfreesboro, TN 37130

Telephone: 615-890-5920

Fax: 615-904-3781

E-mail: marshallj@rcschools.net; pilgrimt@rcschools.net

Purpose

The purpose of this MOU is to establish an agreement between the above-mentioned parties concerning their respective roles and responsibilities for implementation of a GIVE 2.0 grant. This agreement is to establish and coordinate joint processes and procedures for the provision of the GIVE 2.0 grant program for students, staff development, supervision, and program evaluation.

Governor's Investment in Vocational Education Vision and Overview

Since the MOU is intended to describe and detail how partners will contribute to the establishment and maintenance of the GIVE 2.0 program, it is important that all partners to the MOU share a collective vision for the program and have a common understanding as to the scope and purpose of the program.

The description provided under this section will serve as a critical framework for the program as it makes decisions on the implementation of the GIVE 2.0 grant project:

Duties of Parties

In this section, the responsibilities and agreements of each party is described separately.

For the lead agency, MSCC, the responsibilities and agreements include:

- ☐ *Serve as the fiscal agent for the grant;*
- ☐ *Provide needed support including office space, telephone use, and computer use to carry out the administrative duties of the GIVE grant;*
- ☐ *Provide classroom space and other appropriate space to accommodate the GIVE program;*
- ☐ *Be responsible for purchasing necessary materials/supplies/equipment for designated components in accordance with the GIVE grant budget;*
- ☐ *Support staff in trainings and professional development opportunities in areas related to programming and issues;*
- ☐ *Complete paperwork related to any association with the program;*
- ☐ *Provide access to assessment and other available data for the purposes of program evaluation;*
- ☐ *Assist the program in developing, implementing, and making progress on its sustainability plan;*
- ☐ *Recruit and refer students to the GIVE program work;*
- ☐ *Participate on the Advisory Team; and/or*
- ☐ *Other:*

For the school partner, the following may apply:

- ☒ *Provide classroom space and all other appropriate space to accommodate the GIVE program;*
- ☒ *Recruit and refer students to the GIVE work-based learning program;*
- ☒ *Communicate and collaborate with all partners;*
- ☒ *Support the GIVE program in developing appropriate curricula and helping to establish clear linkages with industry demand;*
- ☒ *Establish a collaborative relationship with MSCC faculty and staff including having your school's staff committed to working in the program;*
- ☒ *Complete paperwork related to and associated with the program within a timely manner;*
- ☒ *Provide access to assessment and other available data for the purposes of program evaluation;*
- ☒ *Assist the program in developing, implementing, and making progress on its sustainability plan;*
- ☒ *Participate on the Advisory Team; and/or*
- ☐ *Other:*

Meetings

All major administrative decisions concerning the GIVE program shall be brought to the Advisory Team. The Advisory Team consists of Oakland High School, TCAT Nashville, TCAT

Murfreesboro, 14.0 Strategies, Motlow State Community College, and the Program Director. Decisions will be reached by group consensus whenever possible and appropriate. The Advisory Team will meet at least two times per year, or as needed, about key decisions and issues related to successful program implementation. The Program Director will oversee and make all day-to-day decisions, in consultation with the program staff, when appropriate, for the operations of the program. If partners cannot come to a mutual agreement, the lead agency, MSCC, will have final decision-making authority.

Funding

The partner will not contribute any funding to this project as the grant budget will cover all project costs.

Duration

The agreement is for a period of 30 months beginning with the execution of a grant contract and a preference for maintaining a long-term alliance to help provide skills training and meet industry workforce needs.

Procedures for Modification and Termination

- The MOU may be modified, revised, extended, or renewed by mutual written consent of all parties, by the issuance of a written amendment, signed and dated by all parties. Submission of a revised MOU requires a program amendment to be submitted to the state coordinator for approval.
- Any party of the MOU may terminate their participation in this MOU by giving written notice of intent to terminate to each of the partners. In such case, termination by one or more of the parties to this MOU does not alter the terms or obligations of the other parties to this MOU.
- An individual partners' participation in the GIVE grant program may be terminated for non-compliance with the MOU provided the other parties provide written notice clearly outlining the reasons for the termination.

Severance Clause

If any part of this agreement becomes unenforceable or illegal, then the agreement will continue in force, but the offending provision(s) shall be severed from the agreement and will have no effect on the remaining services agreed to and associated performance.

Signatures

All partners in this agreement sign to confirm their acceptance of its terms by their signature.

(Partner signature)

Michael Torrence

President

Motlow State Community College

Date:

(Partner signature)

John Marshall

Principal

Oakland High School

Date: 9/13/21

(Partner signature)

Tyra Pilgrim

CTE Director

Rutherford County Schools

Date: 9/13/21

Appendix E

Proven Examples of Strong Partnerships

THE COMPANY WE KEEP!

Motlow is a licensed trainer in **automation and robotics** for these manufacturers. We offer training leading to manufacturer-authorized certification, industry recognized Motlow credentials, and customized training. To register for scheduled courses go to **roboticstraining.com**. To ask us about customized training call **833-464-2782**.















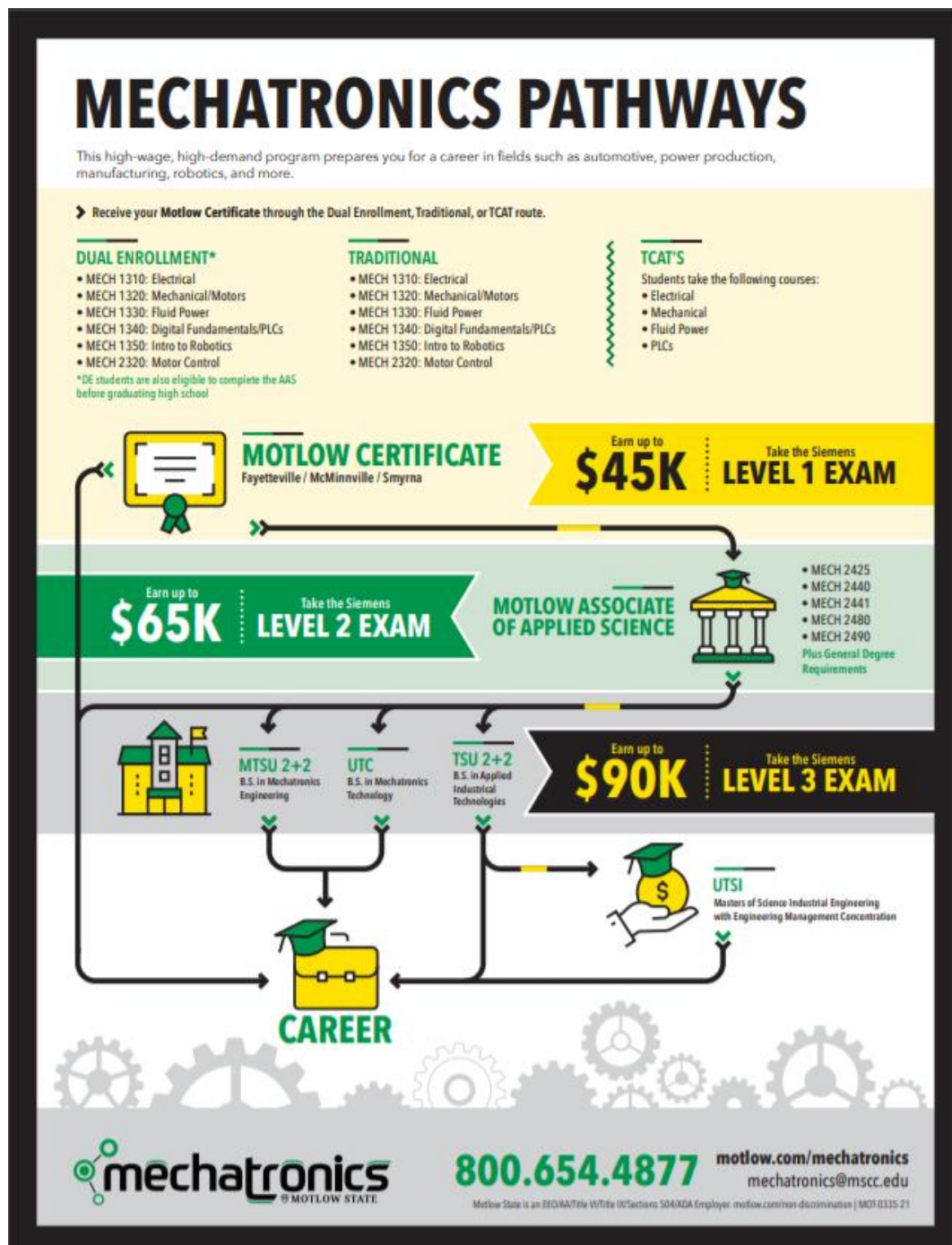




Robot Industry Class Offerings:	PLC and Fluid Power Industry Class Offerings:
<p>ABB (Enroll through ABB's training website or by contacting Larry Flatt):</p> <ul style="list-style-type: none"> • IACS Programming I (US420) • IACS Programming II (US425) • IACS Electrical Service (US421) • RobotStudio I (US399) <p>FANUC (Enroll by contacting Larry Flatt):</p> <ul style="list-style-type: none"> • Handling Tool Operations & Programming • iRVision - 2D 	<p>Allen-Bradley (Enroll through mssc.edu/workforce or by contacting Larry Flatt):</p> <ul style="list-style-type: none"> • ICP146 - Level 1 ControlLogix System Fundamentals • CCP151 - Level 2 Basic Ladder Logic • CCCL21 - Level 3 Basic Ladder Logic Interpretation • CP146 - Level 2 Basic Ladder Logic • CCP299 - Level 1 ControlLogix Fundamentals and Troubleshooting • CCV209 - PanelView Plus Maintenance/T-S • A-B 101 - Fundamentals of PLC's and Basic Programming: CEU's only
<p>Motoman (Enroll through Motoman's training website or by contacting Larry Flatt):</p> <ul style="list-style-type: none"> • DX200 Operator's Training • DX200 Basic Programming • DX200 Basic Programming w/ Material Handling • DX200 Advanced Programming • DX200 Accelerated Programming • DX200 Ladder Editor Programming • YRC1000 Courses Coming Spring 2022 	<p>Mitsubishi (Enroll by contacting Larry Flatt):</p> <ul style="list-style-type: none"> • GX Works3 Programming • RT Toolbox3 Programming <p>Omron (Enroll by contacting Larry Flatt):</p> <ul style="list-style-type: none"> • SYSMAC • CX Programmer 1 <p>Siemens (Enroll by contacting Larry Flatt):</p> <ul style="list-style-type: none"> • TIA Programming 1 • TIA Programming 2 <p>Parker Fluid Power (Enroll by contacting Larry Flatt):</p> <ul style="list-style-type: none"> • Industrial Hydraulic Technology • Pneumatic Technology for Industry

Appendix F

Strong Partnerships By Design



Appendix G

Budget Plan

GRANT BUDGET				
GIVE2 Program Competitive Grant				
The grant budget line-item amounts below shall be applicable only to expenses incurred during the following				
Applicable Period: BEGIN: 11/15/21 END: 05/15/24				
POLICY 03 Object Line-item Reference	EXPENSE OBJECT LINE-ITEM CATEGORY 1	GRANT CONTRACT	GRANTEE PARTICIPATION	TOTAL PROJECT
1, 2	Salaries, Benefits & Taxes	308,000.00	0.00	0.00
4, 15	Professional Fee, Grant & Award 2	227,500.00	0.00	0.00
5, 6, 7, 8, 9, 10	Supplies, Telephone, Postage & Shipping, Occupancy, Equipment Rental & Maintenance, Printing & Publications	28,000.00	0.00	0.00
11, 12	Travel, Conferences & Meetings	31,500.00	0.00	0.00
13	Interest 2	0.00	0.00	0.00
14	Insurance	0.00	0.00	0.00
16	Specific Assistance to Individuals	0.00	0.00	0.00
17	Depreciation 2	0.00	0.00	0.00
18	Other Non-Personnel 2	0.00	0.00	0.00
20	Capital Purchase 2	405,000.00	0.00	0.00
22	Indirect Cost	0.00	0.00	0.00
24	In-Kind Expense	0.00	0.00	0.00
25	GRAND TOTAL	1,000,000	0.00	1,000,000

Budget Narrative Continues Next Page

Budget Narrative:

1. **Salaries, Benefits & Taxes (\$308,000):** Includes the salary and benefits for Trainer 1 for Mitsubishi and FANUC for 2.5 years and Trainer 2 for Mitsubishi and FANUC for 1.5 years.
 - a. Full FTE (2.5 years) Salary for Trainer One : \$192,500 (\$77K per year/40% benefits, fringe)
 - b. Full FTE (1.5 years) Salary for Trainer Two : \$115,500 (\$77K per year/40% benefits, fringe)
2. **Professional Fees (\$221,800):** Includes the expenses required to:
 - a. **\$48,100** total for training related to Train-The-Trainer status for FANUC (8 academic instructors) and Mitsubishi PLC's (9 academic instructors)
 - i. Total Cost per Fanuc trainer is \$3,200 (excludes \$1,500 estimated travel and expenses). 8 Fanuc Instructors X \$3,200 = \$25,600
 - ii. Total Cost per Mitsubishi is \$2,500 (excludes \$1,500 estimated travel and expenses). 9 Mitsubishi X \$2,500 = \$22,500
 - b. **\$5,700** total for Master Industry Trainer Certifications (FANUC and Mitsubishi) for trainers 1 and 2
 - i. FANUC Master Industry Trainer Certification (\$3,200/trainer x 1), excluding travel and related expense reflected in "travel" budget.
 - ii. Mitsubishi Master Industry Trainer Certification (\$2,500/trainer x 1), excluding travel and related expense reflected in "travel" budget;.
 - c. **\$168,000** total to contract i4.0 Strategies to provide TRAM Project Management, and to develop and train on all curriculum necessary for the instructors.
 - i. \$5,600/month x 30 months for a total of \$168,000.
3. **Supplies, Printing & Publications (\$28,000):** Includes estimated expenses associated with marketing, postage, student manuals (i.e., \$100/manual). (\$11,200/year estimated)
4. **Travel (\$31,500):** Includes all travel associated with Train-The-Trainer and Master Industry Certifications listed in Item 2 above. (\$1,500 estimated per trip x 21 trips)
5. **Capital Purchase (\$405,000):** Includes the capital dollars required to purchase the equipment required to implement the TRAM training and certifications as described in the GIVE2 Grant proposal.
 - a. **\$231,000** for purchase of five (5) FANUC ROBOT STEM Cart (\$46,200/cart) in year one of proposed project.
 - b. **\$174,000** for purchase of Mitsubishi 16 training units (\$10,875/unit x 16) in year one of proposed project.
6. **Indirect Costs:** As part of Motlow's commitment to the TRAM project implementation, the Motlow State Community College leadership has decided to forego the estimated \$80,000 that would otherwise be considered indirect costs associated with the planning, development, and implementation of the project throughout the 30-month grant period.

QUOTATION

TO: Motlow State CC - TN
FROM: Technical Training Aids
SUBJECT: Robotics
DATE: 9/13/2021

Item	Contract #	Description	Qty	Price	Total
		Fanuc ER-4iA Fenceless Training CERT Package			
1	FR202-C000	ER-4iA Robot with R-30iB Mate+ Controller Includes: • Six Axis Mechanical Robot • R-30iB Mate Plus Controller - Vision Ready <i>(does not include optional camera, curriculum or training)</i>	1	\$ 38,000	\$ 38,000.00
2		• Advanced CERT - LR Handling Tool Software <i>(includes: Advanced Ethernet I/P Scanner, Advanced Dual Check Safety (DCS), 4D Graphics, Motion Package, PC Remote iPendant, Collision Guard Pack, Interface Panel, Maintenance Package, Menu Utility, Remote iPendant, ROBODRILL Interface.)</i> • MH iPendant with Touch Screen • eDocumentation Fenceless Education Training Cart Includes: • Collaborative Open CERT cart (sides fold) <i>(fits through a standard 36" doorway)</i> • DCS / AB SafeZone Scanner • 180+ Degree Work Envelope • Allen Bradley - SafeZone Safety Laser Scanner • Allen Bradley – Audiutable Safety Stack Light • Enhanced Gripper with embedded Laser Pointer • 120VAC Transformer • 4.6 Gal. Ultra Quiet Air Compressor • Large easy rolling lockable (all direction) casters One Set of Training Manuals • FANUC Robot Operations • FANUC HandlingTool Operation & Programming • FANUC HandlingPRO (ROBOGUIDE Simulation)	1	\$ 15,240	Included
Educational Package Total					\$ 38,000.00

Notes:

1. Prices shown include all shipping expenses and contract discounts.
2. Normal delivery for CERT Cart ranges between 10 to 12 weeks from receipt of purchase order

Technical Training Aids

P.O. Box 17537, Covington, KY 41017
Birmingham home office: 800-851-3987
Andrew Rittmeier - (859) 757-1455 /
andrew@ttaweb.com

Item	Description	Qty	Price	Total
VISION OPTIONS				
1	FR90-12V01 iRVision 2D Guidance Hardware & Software	0	\$ 4,000.00	\$ -
2	FR90-12V02 Fenceless iRVision Package	1	\$ 4,800.00	\$ 4,800.00
3	FR90-12V04 Vision Light Kit	1	\$ 680.00	\$ 680.00
ROBOT APPLICATION/UPGRADE OPTIONS				
4	FR90-13A01 Robot Application/Project – Battery Package	0	\$ 4,000.00	\$ -
5	FR90-13A02 Robot Application/Project – Pill Sorting Package	0	\$ 4,500.00	\$ -
6	FR90-13A03 Robot Application/Project – Mini Marble	0	\$ 2,500.00	\$ -
7	FR402-C000 UPGRADE ER-4iA Robot to an LR Mate 200iD/4S	0	\$ 4,000.00	\$ -
8	FR402-C004 UPGRADE LR Mate 200iD/4S Robot to an LR Mate 200iD	0	\$ 2,000.00	\$ -
9	FR402-C005 UPGRADE LR Mate 200iD/4S Robot to an LR Mate 200iD/7L	0	\$ 3,000.00	\$ -
FACTORY TRAINING OPTIONS				
10	FR90-14T01 Factory training - CERT Program, (with cart)	1	\$ 3,200.00	\$ 3,200.00
11	FR90-14T02 Factory training - iRVision CERT Program, (with cart)	1	\$ 2,800.00	\$ 2,800.00
12	FR90-14T03 Factory training - HandlingTool Operation and Programming	0	\$ 1,936.00	\$ -
13	FR90-14T04 Factory training - Dual Check Safety	0	\$ 1,089.00	\$ -
14	FR90-14T05 Factory training - Collaborative Operations Training	0	\$ 968.00	\$ -
15	FR90-14T06 Factory training - (SCARA) Robot Operations & Maintenance	0	\$ 1,815.00	\$ -
16	FR90-14T07 CERT Instructor Transfer Program	0	\$ 900.00	\$ -
ACCESSORIES & CURRICULUM OPTIONS				
17	FR90-15A01 Touch Screen iPendant for the R-30iB Controller	0	\$ 4,000.00	\$ -
18	FR90-15A02 Touch Screen iPendant for the R-30iB+ Controller	0	\$ 5,000.00	\$ -

19	FR90-15A04	1.5M iPendant PC Conversion Kit	0	\$ 450.00	\$ -
20	FR90-15A05	3M iPendant PC Conversion Kit	0	\$ 500.00	\$ -
21	FR90-15A06	ROBOGUIDE Software Annual Renewal	0	\$ 100.00	\$ -
22	FR90-15A07	Student MH eLearn Web Course Annual Renewal	0	\$ 100.00	\$ -
23	FR90-15A10	ROBOGUIDE Network Server License	0	\$ 2,500.00	\$ -
24	FR90-15A10.1	ROBOGUIDE Server Client or Renewal License	0	\$ 150.00	\$ -
25	FR90-15A18	ROBOGUIDE Virtual Server	0	\$ 1,500.00	\$ -
26	FR90-15A11	Robot Operations Manual - Qty 5 Minimum	5	\$ 100.00	\$ 500.00
27	FR90-15A12	HandlingTool Operation & Programming Manual - Qty 5 Min	5	\$ 100.00	\$ 500.00
28	FR90-15A13	VO-1800-008-020 Calibration Grid	1	\$ 100.00	\$ 100.00
29	FR90-15A14	HandlingPRO (ROBOGUIDE Simulation) Manual - Qty 5 Min	5	\$ 100.00	\$ 500.00
30	FR90-15A15	iRVision 2D Manual - Qty 5 Minimum	5	\$ 100.00	\$ 500.00
CONVEYOR OPTIONS					
31	FR90-16C01	Single Conveyor System (Complete for 1 or 2 Conveyors)	0	\$ 10,450.00	\$ -
32	FR90-16C02	Add-on Single Conveyor System	0	\$ 7,670.00	\$ -
33	FR90-16C03	Dual Conveyor System (Complete with 2 Conveyors)	0	\$ 17,330.00	\$ -
GRIPPER OPTIONS					
34	FR90-18G01	Vacuum Gripper	0	\$450.00	\$ -
35	FR90-18G02	Mechanical Gripper	0	\$790.00	\$ -
36	FR90-18G03	M1iA Gripper Accessory Kit	0	\$490.00	\$ -
37	FR90-18G04	LR Mate Gripper Accessory Kit	0	\$300.00	\$ -
38	FR90-18G05	Electric Parallel Servo Gripper	0	\$1,530.00	\$ -
39	FR90-18G06	Multi-EOAT Adaptor Kit	0	\$800.00	\$ -
40	FR90-18G07	Multi-EOAT Gripper Kit	0	\$1,250.00	\$ -
INTERFACING & SYSTEM OPTION					
41	FR90-21S01	I/O Simulation Box - Enclosed CERT Cart	0	\$2,170.00	\$ -
42	FR90-21S02	I/O Simulation Box - Fenceless CERT Cart	1	\$2,720.00	\$ 2,720.00
				Educational Package Total (with options included)	\$ 46,200.00
				Trainer The Trainer	\$ 6,000.00

Appendix H

Contingency Plan

Risk	Probability	Preparation	Response
Change in Leadership	Possible	<ul style="list-style-type: none"> Upon grant award, a succession plan for leadership will be drafted 	<ul style="list-style-type: none"> Notify THEC Notify stakeholders Implement succession plan protocol
Change in Staffing	Likely	<ul style="list-style-type: none"> All project artifacts/data will be housed on a cloud-based, mobile app & sharable with K-12, Workforce, & Industry stakeholders 	<ul style="list-style-type: none"> Notify THEC Notify stakeholders of changes Host a debrief w/ new staff Introduce new staff to all grant partners w/in two weeks
Natural Disaster	Possible	<ul style="list-style-type: none"> Motlow and our partners will follow all local, state, and federal guidelines to prepare an emergency response plan 	<ul style="list-style-type: none"> Notify THEC Contact stakeholders & convey challenges Follow institutional natural disaster protocol
Other/Unforeseen	Possible	<ul style="list-style-type: none"> Monitor for possible events and be proactive in taking preemptive action 	<ul style="list-style-type: none"> Notify THEC Communicate w/ stakeholders

Appendix I

TRAM Project Staff

Name	Grant Role	Institution	Title	Vita
Larry Flatt	Project Director	Motlow State Community College	Dean of Career and Technical Programs	BS, Tennessee Technological University , MBA, Middle Tennesse State University
Tammy O'Dell	Grant Administration	Motlow State Community College	Director of Grants	BS, Tennessee Technological University, MS, Austin Peay State University
Robert Graff	Project Coordinator, Curriculum Development	I4.0 Strategies, LLC	President	BS, University of Cincinnati